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THE

# FLORIST'S JOURNAL

FOR THE YEAR

**1845.**

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## P R E F A C E.

THE opportunity of annually addressing our readers in the familiar and confidential manner of mutual intercourse, is one we are ever proud of; being fully impressed with its value as an occasion for explaining our present position, and of stating what in the prospective seems likely to affect our future arrangements.

On the completion of this, the Sixth Volume, we have the gratification to observe that **THE FLORIST'S JOURNAL** is now in a higher position than at the close of any preceding one; a steady increase of the circulation having continued throughout the entire year, and offers of assistance continue to reach us from all sides: these are matters of gratulation which serve to quicken and increase our desire to be useful. After tendering our cordial thanks to both contributors and readers for this addition to former favours, we proceed to mention the arrangements we propose to adopt in the future management of the Journal.

It has been shown to us by a great number of correspondents, that the main object in the establishing of the Journal, its general usefulness, would be very much ex-

tended by an increase of its size, and having experienced a great deal of inconvenience from its present space being so inadequate to the flow of subjects kindly forwarded, to say nothing of the disappointment arising from the non-appearance of excellent papers; this, together with the numerous promises received from those who can contribute the best of matter, and the vacuity which has existed in garden literature since the cessation of the "Gardener's Magazine," has induced us to accede to the repeated requests of our friends, and with the succeeding volume will commence a NEW SERIES OF THE FLORIST'S JOURNAL. Each number will then contain two plates instead of one as at present, accompanied by double the usual quantity of letter-press on *every subject connected with a garden*; information will thus be conveyed on various matters that we have hitherto been obliged to suppress, and the gardener, the florist, the amateur and general lover of flowers, will be presented with a means of acquiring knowledge in each respective division. All matters pertaining to Horticulture will be treated of in succession, and nothing neglected.

A variation of the plates will also be effected by the occasional introduction of coloured figures of new or esteemed varieties of fruit, and illustrative woodcuts will be interspersed with such subjects as may require it, and the price of each number will be one shilling.

Thus we hope to supply the gardening world with a work of sterling value, suited to the wants and means of all; and to enable us successfully to carry forward this project, we earnestly beg the continued co-operation of

our friends, trusting our increased though humble efforts may be mutually beneficial.

It is only necessary to add, the property in the work, and the direction of it, will continue in the same hands, and the style and title of the book remain unchanged.

With renewed acknowledgments of past obligations, we beg to commend the New Series to the favourable attention of all our friends.







THE  
FLORIST'S JOURNAL.

JANUARY, 1845.

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ALONA CŒLESTIS.

WITH AN ENGRAVING.

THE majority of flower gardens are indebted through the latter portion of the summer season for no inconsiderable amount of beauty to the interesting cerulean-tinted flowers of the genus *Nolana*; and, through the agency of two of its species, *N. prostrata* and *N. atriplicifolia*, it has become well known and valued: there are also two others, *N. tenella* and *N. paradoxa*, which were introduced some years back, but being of little beauty, have been allowed to fall out of cultivation, and are now nearly or quite lost to this kingdom. These are all annuals, but there exists in Chili and Peru a group of shrubby plants, very nearly allied, and that have hitherto been considered as forming part of this genus, which, now that an opportunity is afforded for examination, are found to possess generic distinctions sufficient to call for a separation of the genus as originally constituted. Some of these plants are represented by their discoverers as being remarkably beautiful, and this character is fully borne out by the fine appearance of our present illustration, which is the first introduction of the class.

Dr. Lindley, in the *Botanical Register*, 1844, t. 46., has made the required separation, and explained the distinctions on which the several new genera are founded. We take the liberty of quoting the following:—

“ The genus *Nolana*, as at present constituted, includes plants

so different from each other in structure and general appearance, that considering the principles adopted in the classification of the Convolvulaceous, Boraginaceous, and other allied orders, it is necessary to break it up into several genera, for which good characters will be found in the very remarkable fruit, and probably in the flowers also, whenever an opportunity shall occur for examining them in a fresh state.

“ If we regard *Nolana prostrata* as the original species of *Nolana*, we shall find its distinctive character resides in the regular combination of its twenty ovaries into five nuts or drupes, each of which is four-celled.

“ But there is another group, consisting principally of shrubs, in which the ovaries are very irregularly combined, so that while some of the nuts or drupes are four or more celled, others have not more than one, two, or three cells. They may be conveniently separated under the name of *Alona* (the anagram of *Nolana*).

“ Corresponding with these in the irregular condition of the fruit, but not having more than eight or ten ovaries in combination, are two singular plants, with all the habit of scrubby *Salsolas*, and a very small hypocrateriform corolla. They may be named *Dolia* (from  $\delta\omega\lambda\omega\varsigma$ , deceptive); they being one thing and looking another.

“ On the other hand, in *Nolana paradoxa* and *atriplicifolia*, there is a complete breaking up of the twenty ovaries into so many independent drupes. Those species constitute a group, bearing the same relation to the other genera, as *Malope* to its neighbouring *Malvaceæ*. The name *Sorema* (from  $\sigma\omega\rho\omega\varsigma$ , a heap) may be applied to them.

“ Finally, under the name of *Aplocarya* ( $\alpha\pi\lambda\omega\varsigma$ , simple, and  $\kappa\alpha\rho\varsigma$ , a nut) it will be desirable to station a singular scrubby shrub, in which the ovaries are five in number, and altogether simple.”

In addition, brief characters are given of each species under this new arrangement, by which it appears the first division, or **NOLANA**, contains five; viz.

\**N. prostrata*, a native of Chili.

\**N. tenella*, — Chili, syn. *N. paradoxa*.

*N. spathulata*, — Peru.

*N. inflata*, — Peru.

*N. ? coronata*, — Peru.

The second division, or ALONA, is more extensive. Its species are—

* <i>A. cœlestis</i> , a native of Coquimbo.		
<i>A. rostrata</i> , —	Coquimbo.	A very fine species, with flowers as large as the last.
<i>A. obtusa</i> , —	Coquimbo.	Like the last, but leaves shorter, flowers smaller, and calyx different.
<i>A. glandulosa</i> , —	Coquimbo.	Flowers smaller than in the last.
<i>A. carnosia</i> , —	Coquimbo.	Flowers as large as those of <i>A. obtusa</i> .
<i>A. tomentosa</i> , —	Valparaiso.	Small white flowers.
<i>A. revoluta</i> , —	Peru.	Herbaceous, shrubby at the base; flowers as large as in <i>Nolana prostrata</i> .
<i>A. baccata</i> , —	Coquimbo.	Flowers large and apparently yellow; drupes quite pulpy in the dried state.
<i>A. longifolia</i> , —	Coquimbo.	A coarse half succulent plant, with flowers an inch and a half long.

The third division, DOLIA, has only two species :—

*D. vermiculata*, a native of Coquimbo.

*D. Salsoloides*, — Chili. This has quite the appearance of some of the Salsolas, or still more of *Chenopodium maritimum*.

The fourth division, SOREMA, contains —

\* *S. paradoxa*, a native of Chili, syn. *Nolana paradoxa*.

\* *S. atriplicifolia*, — *Nolana atriplicifolia*.

And the fifth, APLOCARYA, has

*A. divaricata*, a native of Coquimbo. The scrubby shrub before alluded to.

Those marked with an asterisk are the only species that have yet been introduced to our gardens.

For this list also we are indebted to the *Botanical Register*, which, in addition, has much valuable information to the botanist on the subject.

The credit of raising and flowering the subject which has called forth these remarks (*Alona cœlestis*) is due to Mr. Best, nurseryman, of Reading, late gardener to A. Park, Esq., of Merton Grove, Surrey. The seed was introduced in the spring of 1843 by Mr. Brydges, from Argueros, Chili; Mr. Best receiving it in April of the same year from Mr. Carter, seedsman, of Holborn. The treatment it received at his hands, and by which it has grown and flowered finely, is this :—

The soil used was a mixture of one fourth peat, a good proportion of sand, and the remainder fresh turfey loam, in which the plants grew freely, the large fleshy roots penetrating through the bottom of the pot frequently during the winter, and the plant was as often repotted, for if not attended to in this

respect, the foliage at any season is very liable to turn yellow, giving it an unhealthy appearance.

Mr. B. says, "When the large-shift system is adopted in its culture, I would recommend the use of a large portion of broken potsherds intermixed with the soil, every cultivator of plants being well aware of the absorbing properties of this material, and the plant requiring a very liberal supply of moisture will at once convince them of the beneficial effect of such a course.

"An airy situation in the greenhouse (or cold pit, I think, would be preferable) will suit it, or it may be grown altogether in the open air. The whole of my stock has been exposed to the vicissitudes of heat and rain since May last, and I do not find that the heat discolours the bloom or injures the plant in the least, so that I think we may conclude it is well adapted for bedding out during the summer months. The plant with me has proved a perpetual bloomer since June last, with every appearance of an abundant supply for the next six weeks. (Sept. 11th.)

"Its degree of hardiness I am yet ignorant of, not having had an opportunity of testing it by exposure to frost."

Thus then it appears we have another most valuable addition to our ornamental plants, which may be preserved with only ordinary attention, peculiarly suited for bedding in the flower-garden, where its neat habit, resembling a succulent heath (if such a thing can be imagined), and its lively blue flowers, produced in such long succession, will ever make it an attractive object.

EDITOR.

### ON THE RANUNCULUS.

SIR, — Your Correspondent T—— wishes to know why (in a short note under the signature "CLERICUS") I recommend old cow dung for ranunculus beds in preference to fresh, and suggests that the nutritive properties of the manure are likely to be lost by keeping. I do not pretend to give him an answer on scientific principles, but on practical observation, and do not assert the answer to be the most plausible one, though I think the fact to be true. If T——will examine any heap of partially decomposed cow manure, he will find, I think, a vast quantity of earth-worms and larvæ of various kinds; in addition to what he

sees, many thousands are then in embryo, and if he takes a portion of that, and has the worms picked out of it, he will find that after lying for some time many small worms may be detected through it, which have come into being during that period; now, although worms are always troublesome anywhere in a garden, there is no bed in it that they are likely to deface more than the ranunculus bed, as they drag the roots out of their places, and thereby disarrange the whole bed; they also make it porous and light for the water to run through, which with this flower is highly injurious. Now, by using old manure much of this is obviated; the worms have all attained a good size, and can be easily picked out, and there are no young ones to take their place.

There must be something too in fresh manure injurious to this flower, especially in hot seasons, as the past year has proved. My beds prepared as directed in your October Number escaped tolerably well the terribly destructive season, whilst others prepared with fresher manure were scorched, and lifted miserably. The experience of such eminent growers as Lightbody and Tyso are also, surely, a very good reason for using it as I have directed. Have Mr. Lockhart's succeeded well this year? or has the hot season shown him that fresh manure does not answer? I merely ask this from not having seen him entering the lists as usual at Chiswick and the Surrey Gardens against Messrs. Tyso.

While upon this subject allow me to send you a list of a few good sorts, which T.— will do well to add to his list, if he does not already possess them, as they are sure to give satisfaction: —

*Lightbody's Chimpanzee.* An ugly name for a most beauteous flower; a white ground with a broad rose edge about the eighth of an inch deep; large size, free grower and bloomer.

*Lightbody's Larne.* A full, beautiful, white ground with a purple edge; a most striking and desirable variety.

*Lightbody's Talisman.* A very delicately beautiful flower; white ground with a narrow pencilled edge of bright purple; a first-rate flower.

*Lightbody's Sir John Graham.\** Another very beautiful

\* [It appears from our correspondent's description that there are two different flowers sold under this name. We have a Sir John Graham (said

flower; ground colour a clear primrose, edging a bright purple, petals very waxy; a very first-rate flower.

*Lightbody's Lady Sale.* White ground, with a rose spot regularly distributed over it; a new flower, and one deserving of a place in every collection.

*Lightbody's Blank.* Another very pretty flower; white ground, with light purple mottled.

These six are expensive kinds. Of less scarce sorts, Lightbody's Triton, Margent, Constantia, Vanguard, Splendour, Princess Royal, and Tartar can be recommended.

*Tyso's Edgar.* This flower has been called by judges about London the model of perfection; its shape is very good; yellow ground, red edge.

*Tyso's Pauline.* A delicate pretty flower; white ground, lilac edge; and, when caught not too fully open, a very delicate and pretty variety.

*Tyso's Delectus.* Yellow ground, with red edge; another pretty and well marked flower. These two were figured in the second volume of *The Florist's Journal*.

*Tyso's Perfect.* A good yellow flower; comes occasionally with a narrow red edge, but more frequently is a yellow self.

Hubert, Cathcart, and Vendome, by the same raisers, are also very good kinds. I can bear my humble testimony to the exceeding liberality with which both these growers are accustomed to treat their customers. My own taste inclines to Mr. Lightbody's flowers, as they are fuller and less apt to show the eye. But no collection now-a-days can be complete without a few of each: and they have this very great qualification, that while the old Dutch kinds are so exceedingly uncertain, both in their growth and in their flowering, these seedlings always hold their ground and bloom freely.

I have thus endeavoured to answer T——'s question, and trust my answer is satisfactory; and, in conclusion, beg to say that

to be Lightbody's), the description of which stands thus:— first-rate flower, white ground colour, with medium crimson edge. There is also a Sir James Graham, or rather two of them, the correct one being a decidedly inferior flower; it is white with purple spots. The other is that sold by Messrs. Lockhart erroneously under the latter name, it being the true Sir John. We believe Mr. Lightbody originally called this flower Sir John *de Graham*, — Ed.]

We shall be glad to receive the directions for planting our respected correspondent mentions.

ranunculuses require but little attention now till planting time, except looking over them occasionally, to see that no mildew gets on them. The beds may be occasionally raked over to get rid of weeds, moss, &c., and if wireworms are in the ground, it would be desirable (as I have done) to put some sliced potatoes in them so as to entrap the insects before planting time. I may perhaps (if you wish it) send you a few observations with regard to planting in time for your February Number; and remain, Sir, your obedient servant,

H. H. D.

*Bray, Ireland, Nov. 1844.*

### HORTICULTURAL ESSAYS,

*By the Members of the Regent's Park Gardeners' Society.*

## ON THE PREPARATION AND PLANTING OF ORCHARDS.

By Mr. E. BRAG.

ORCHARDS are portions of ground appropriated to the growth of fruit trees only. When made on an extensive scale, they generally contain apple, pear, plum, and cherry trees; but a complete orchard should contain besides, quinces, medlars, mulberries, services, filberts, Spanish nuts, and barberries; also walnuts and chestnuts, the two latter are well adapted to afford shelter to the rest, and for that purpose should be planted around the boundary, at the most exposed places.

The situation which is selected for an orchard should be rather elevated than otherwise, on a gentle declivity, and open to the south and south-east, to give free admission to the sun, and to promote a circulation of air, which will dry up damps and disperse fogs, and by this means induce healthiness in the trees, and a high flavour in the fruit. It should, however, be well sheltered from the north and westerly winds, and if not naturally so by the surface of the ground, it must be rendered so by plantations, for which purpose the chestnut and walnut trees already referred to will be well adapted. In very ex-

posed situations, and where there is plenty of room, a few forest trees may be added, at a little distance.

That soil which produces good crops of corn, grass, or garden vegetables, will also do well for an orchard. A loamy soil should, however, be preferred, and a shingly or gravelly soil avoided, unless there is loam intermixed: a medium soil, between light and dry, and wet, and stubborn, will be suitable. If the subsoil is clay, the roots will require to be cut in every four or five years, to prevent them from penetrating too deeply. Before planting, the soil should be trenched two spades deep, and ten feet broad, where the trees are to be planted, and the subsoil should also be loosened, if it is not clay, which is best kept trodden down. If it is pasture land, it ought to be ploughed and summer fallowed, to kill the grass, as well as pulverize the soil. I consider ploughing to be more effective than trenching, as the latter operation turns the sod below, where it is a long time decaying, and harbours the grub, which frequently does mischief to the roots.

The best time for planting on a dry soil is October; if wet, the end of February or even March is preferable. It will be necessary to support the trees against the wind until they become well rooted. In planting, endeavour to suit the trees as well as possible to the soil and situation, and to plant them at proper distances from each other; this may be from forty to eighty feet, according to the size attained by the trees when full grown. Fruit trees, when planted too thickly, are liable to become blighted, and covered with moss, which is highly detrimental. Procure the trees, if possible, from a similar soil to that in which they are about to be planted, or rather more sterile, for trees when transplanted from a rich soil to a poor one, seldom thrive; but if from a poor soil they are removed to a more fertile one, they will seldom fail.

In the choice of trees, too much care can scarcely be bestowed: none should be admitted which have not good roots, fair clean stems, and properly formed heads. It is necessary, too, to secure a proper assortment of varieties, especially of apples and pears, for much will depend on this: very few of the summer kinds will suffice; a greater number of autumn kinds should be chosen, and still more of the late kinds, as upon these latter will depend the supply, from the month of January

to July. In general, a greater quantity of apples should be planted than of any other fruit.

If the trees are planted in the quincunx order, and at a distance of eighty feet apart, the ground between them may be cropped, if thought proper. Ploughing, or digging the ground, provided it be not done so deep as to injure the roots, will serve to keep the trees in a healthy flourishing state, by admitting the sun and rain.

If the spring, after planting, should prove a dry one, it will be desirable to mulch the surface, as far as the roots are likely to extend, with half-rotten dung, or leaves; or it would be better to procure some turf, and lay it the grassy side downwards; either of these plans will keep the ground moist, and save a great deal of watering, and when decayed they may be dug in, and will thus become beneficial.

Trees that are of different sizes, when full-grown, should never be planted promiscuously; but if the soil is favourable, plant the large growing ones towards the back, and the others in succession according to their size. In this way, when viewed from the front, they will have a very agreeable appearance, which will not be the case if they are planted without order; and, at the same time, the more delicate kinds will not be liable to be injured by those which are more robust in their growth.

When cattle are intended to feed beneath, the stems of the trees should be high enough to prevent them from injuring the lower branches; and they should be fenced in such a way as to prevent their bark from being injured by the rubbing of the cattle, especially whilst the trees are young.

If the surface of the soil is liable to become wet, it may be drained in this way:—Let deep furrows be made, from one to two feet in depth, and from one end to the other of the ground, between every two rows of trees, and then let the ground be sloped to the bottom of the furrow: if it is in pasture, the turf may be taken up and relaid when the furrows are formed. If the ground is naturally wet, underground drains will be required.

Burning weeds, rotten wood, or any rubbish when the trees are in flower, might be found a great preservative against blights and caterpillars. I would recommend annually washing

the trees with one of the many mixtures which are used. The following is a simple and effectual one:— Mix fresh cow-dung with urine and soap-suds, and after scraping off all the moss and cankered bark, wash over the trees with this mixture; this will prevent the growth of moss, and lessen the number of insects, by destroying their eggs.

April 28. 1844.

## ON THE CULTURE OF BALSAMS.

By Mr. D. WATT.

THE Balsam is one of the best of our annuals; it was originally brought from the East Indies in 1596, but since then has been greatly improved by cultivation. It succeeds well in a rich, light compost, such as equal parts of turf-loam, leaf-mould, and well-decayed sheep's dung. To grow them to good advantage, and flower them early, the seeds must be sown the latter end of February, in equal parts of loam and leaf-mould: they should be placed on a gentle bottom heat, and as near to the glass as possible. As soon as they have formed two leaves, put them singly into 60-sized pots, still keeping them on a bottom heat: when the roots reach the sides of these pots, shift them into 48's; thence the "one-shift system" may be adopted with success. To bring them to a flowering state, use the compost I have above recommended; water them freely with manure water, made with decayed sheep's dung; keep them near the glass, but at a sufficient distance apart to allow them the full benefit of the light; remove the first straggling blossoms as they make their appearance on the plants, and afford them sufficient air to prevent them becoming weak and drawn: under this mode of treatment, by the month of June, the plants will have attained the height of from five to six feet, and will be furnished with branches down to the top of the pots, forming complete masses of bloom. From the diversity of their colours, they form a pleasing contrast when mixed among other plants in the conservatory or greenhouse. When a separate house can be afforded for these plants, it is desirable; but that can seldom be afforded: we can, however, surround

them with circumstances congenial to their growth, in those positions which we can appropriate to their use.

There are several species of Balsams in our gardens, but the gayest and best of all is *Impatiens Balsamina* (*Balsamina hortensis* of Desfontaines). There are others, such as *I. Nolime-tangere*, *I. coccinea*, *I. biflora*, and some more recent introductions from India: the first of these is found wild in our own country, and other parts of Europe; but the double Balsam of our gardens is the only one we have at present worth growing.

Balsams, as border flowers, may be showy enough in some situations, and may flower well enough in some seasons, but they are more frequently rendered unsightly by heavy rains and cutting winds. My opinion is, that our common garden Balsam can be grown to far greater perfection than it generally attains.

*Buckingham Palace Gardens, October 31. 1844.*

[*Balsamina hortensis* is doubtless the best of this family for cultivating as a tender annual; but several of the half hardy species, introduced within the last few years from the northern provinces of India, are certainly highly deserving of cultivation in the flower-garden. Probably Mr. Watt means that the double Balsam is the only one adapted for being grown within-doors. T. M.]

## VEGETABLE PHYSIOLOGY.—THE LEAVES OF PLANTS.

By Mr. T. MOORE.

(Continued from Vol. V. p. 180.)

THE functions of leaves are to act as organs of nutrition, for by them respiration and assimilation are carried on. They act as laboratories, in which the crude sap impelled into them from the stem evaporates about two thirds of its water, and becomes united with the carbon of the atmosphere; and they furnish nutriment to the young fibres, which pass from them, and the buds, in the form of alburnum and liber; and also to all the

parts above and beneath them. These functions and purposes of leaves are variously exemplified: thus, if a number of rings of bark are divided from each other by spaces without bark, those rings which have leaves on them will live longer than those which have none; if the leaves are stripped from a plant whilst its fruit is immature, the fruit will not ripen, but fall off; if a branch is denuded of its leaves, for a whole season, it either dies, or does not perceptibly increase in size: thus, again, if the cotyledons, or seed-leaves, are destroyed, the young plant will increase but slowly, if at all.

Leaves are most admirably adapted for the performance of their functions; they consist, as we have seen, of a thin plate of cellular tissue, pierced by air vessels and woody tissue; and this is enveloped by a hollow empty stratum of cells, forming the cuticle. Beneath the cuticle, on the upper side of the leaves, the bladders of cellular tissue are compactly arranged, perpendicular to the plane of the cuticle; whilst beneath the cuticle, on the lower side, they are loosely arranged: in the former case, they have but a small number of air cavities; in the latter these abound, and are in connection with the stomates. To prevent too rapid an evaporation is the ordinary office of the cuticle; whilst in cases where it is necessary to furnish the means of freely parting with superfluous moisture, it is provided for in the stomates, which act like valves, and open to permit its passage: they also seem to supply fluid, by opening to imbibe the moisture of the atmosphere. In leaves which are submersed, and where these variations, arising from atmospheric influence, cannot occur, neither cuticle nor stomates are present.

The property of giving out and imbibing fluids, which is possessed by the leaves, differs considerably with respect to quantity, in different plants: thus, some perspire considerably more than their own weight of aqueous matter, in the course of one day; whilst others, such as succulents, perspire very sparingly; and the same may be said with reference to the quantity of fluid imbibed. These variations result from the presence, or absence, and the relative sizes of the stomates, which exist in the outer covering of the leaf.

*Hairs* are believed to aid these functions of the leaves, by collecting humidity from the atmosphere; but whether leaves

have the same power independently of hairs, is a disputed point. Some persons believe that absorption takes place from either surface of the leaf, but that some plants absorb more powerfully by one surface than by the other; others contend that the leaves themselves do not possess any power of attracting fluids. Considering the permeability of vegetable tissue, and the thinness of the cuticle, it seems hardly to admit of doubt that they do possess some power of absorption; and this is apparently borne out by the effects produced in hot weather, either by a shower, or by the imitation of one in syringing the exhausted and drooping plants in a hothouse.

The leaves have a peculiar power of producing chemical changes on the air. It may not be here out of place to remind you, that the air we breathe consists principally of two invisible gases, which are called oxygen and nitrogen; the former, though too powerful to be breathed in a pure state, is yet that principle by which life is supported; the latter is in itself destructive of life, and seems employed to moderate the effects of oxygen. When we breathe, the oxygen is separated from the nitrogen, in passing through the lungs, and then becomes united with another body supplied by the decomposition or combustion of food, called carbon; by that union, the respired oxygen is converted into carbonic acid, which latter compound is injurious to animal life. Thus, we perceive that animal respiration vitiates the atmosphere; but plants, when under the influence of light, decompose the carbonic acid; they absorb the carbon, and give out again the oxygen, and by this means the equilibrium is maintained. It must be recollected, that this action is almost exclusively confined to the green parts of plants; the flowers, and fruits, and even stems, being continually engaged in converting the oxygen into carbonic acid. This explains the cause of the unhealthiness attributed to cut flowers, when introduced into rooms, especially sleeping-rooms, the effects of which are most powerful at night, in the absence of light, when the purifying process carried on by plants becomes reversed. The importance of solar light to plants, which it is desired to maintain in a healthy condition, thus becomes evident, since it is by its influence that the decomposition of carbonic acid, and of water, and the extrication of the nitrogen of the atmosphere, are effected. Perspiration, also, is principally excited by the action

of the solar rays, and becomes suspended during the night, or when light is withheld; the green colour in leaves is dependent on the influence of light, and becomes intense in proportion to the degree of exposure to it, within certain limits, which vary according to the natural condition of the plants; in total and long continued darkness leaves lose the green colour altogether, and become blanched and etiolated.

The food taken up by the rootlets is gradually conveyed upwards through the stem to the leaves, and there becomes decomposed and assimilated; probably some alteration takes place during its passage through the stem, such as parting with a portion of its water, and fixing carbon among the tissue: certainly when it reaches the leaves, it is by no means in the condition in which it entered the roots, but becomes altered in its nature and specific gravity, by taking up what soluble matter it meets with in its progress. The changes produced by the exposure of the vegetable fluid in the leaves are principally the decomposition of carbonic acid, the abstraction of superfluous water by perspiration, and the assimilation of the various remaining matters. Light, and the atmospheric dryness which generally results from its presence, are believed to be the causes which produce these several actions: light is, however, believed to be the remote, rather than the direct cause of perspiration, which is induced by the dryness produced by means of the heating and rarification of the atmosphere when solar light is applied; this is apparently illustrated by the fact that plants or flowers when exposed to the dry air of a sitting room, though imperfectly illuminated, are found to perspire so much more than when in the open air, and exposed to direct light, that in such situations it is next to impossible to keep many kinds alive: light is, however, to all appearance the exclusive cause of the decomposition of carbonic acid.

(*To be continued.*)

## LIST OF NEW PLANTS.

### VACCINACEÆ. — *Decandria Monogynia*.

*Gaylussacia Peudo-Vaccinium*. The genus *Gaylussacia*, so named after M. Gay Lussac, the eminent French chemist and philosopher, differs from *Vaccinium* in the same way as *Arctostaphylos* from *Arbutus* — it has but a

single seed in each cell. The species are found chiefly in Brazil, where they are common, Peru, and the North of India; and among them are several which, as this species shows, would be worth introducing to cultivation. *G. Pseudo-Vaccinium* is a hardy and very pretty greenhouse shrub, which should be grown in a mixture of sandy peat and leaf mould, and treated in the same way as Cape heaths. The flowers appear to be abundantly produced, of a pleasing deep pink. — *Bot. Reg.* 62.

ORCHIDACEÆ. — *Gynandria Monandria*.

*Anguloa Clowesii*. Among a lot of plants collected in Columbia by Mr. Linden in 1842, this fine thing was received by the Rev. J. Clowes, of Manchester, with whom it flowered, for the first time in Europe, in March, 1844.

The genus *Anguloa* approaches so nearly in structure to *Lycaste* as to render it a matter of some difficulty to properly distinguish the separation: one peculiarity, the funnel-shaped condition of the middle lobe of the lip, at first sight seems to belong only to *Anguloa*, but it is in reality only an exaggerated condition of that kind of lip which we have in *L. aromatica* and its allies, in which there is a large flat appendage resting on the surface of the lip: the chief difference consists in that appendage being attached to the lip at the base only; while in *Anguloa* it is united by the sides also. The main difference, however, between *Anguloa* and *Lycaste* consists in this, that in *Lycaste* the lateral sepals are placed edge to edge in the manner of a true *Maxillaria*, but in *Anguloa* they overlap each other very considerably.

The flowers of this species are large and showy, of a bright lemon-colour, with a white lip; they are produced from the base of the pseudo-bulb, singly on a foot stalk, rising about nine inches in height, a strong bulb frequently throwing up four or five of these flowers. — *Bot. Reg.* 63.

AMARYLLIDACEÆ. — *Hexandria Monogynia*.

*Ixiolirion montanum*. — This long desired and very ornamental plant was sent to Spofforth by the kindness of J. Cartwright, Esq. He received it at Constantinople from Colonel Shiel, who discovered it in the neighbourhood of Teheran. The bulbs are very remarkable-looking, rather like large nuts, with a dark chocolate-coloured smooth coat. The plants are perfectly hardy, producing their beautiful lilac flowers freely in May and June. — *Bot. Reg.* 66.

TREMANDRACEÆ. — *Octo-Decandria Monogynia*.

*Tetratheca hirsuta*, syn. *Tremandra Hugelii*. Messrs. Rollisson received this plant from Baron Hugel in the summer of 1843, and flowered it last March. It is a very nice greenhouse plant, gay with purple starry flowers, requiring the treatment usual for Australian plants. — *Bot. Reg.* 67.

GESNERIACEÆ. — *Didynamia Angiospermia*.

*Achimenes picta*. One of the splendid plants introduced by the Horticultural Society of London from Mexico, and now, from its dispersion by that useful body, among the greatest ornaments of our stoves during the autumnal and early winter months.

Nothing can exceed the beauty of the foliage, whether we consider the velvety and orange hue of the pubescence or the rich deep green of the groundwork, as contrasted with the milk-like spots and reticulations. Nor are the flowers wanting in charms; they are copious, though solitary, from the axils of all the upper leaves, yellow, gorgeously tinged and spotted with red. — *Bot. Mag.* 4126.

PLUMBAGINÆ. — *Pentandria Pentagynia*.

*Armeria cephalotes*. This fine and most desirable plant has lately been brought into notice as something altogether new to our gardens (under the name of *Statice Pseudo-Armeria*). But though perhaps long lost to our collections, it was introduced to the Royal Gardens of Kew so long ago as the year 1775, by J. N. de Jacquin; and was probably, previously to that time, detected at Algarbia in Portugal, by Masson, while collecting for his Majesty George III. It is probably not hardy enough to bear the open border, but in a cool greenhouse few plants make a more striking appearance, flowering in August and September. — *Bot. Mag.* 4128.

TERNSTREMIACEÆ. — *Polyandria Pentagynia*.

*Laplacea semiserrata*. A native of various parts of Brazil, where, according to Martius, it forms a tree thirty or forty feet in height. Whatever may be its size in its native country, it is quite certain that in our stoves it flowers readily in the autumn, when not more than a foot high, and recommends itself by its handsome tea-like ever-green foliage, even more than by its large delicate white flowers. Mr. Gardner gathered it in Goyaz. — *Bot. Mag.* 4129.

ORCHIDACEÆ. — *Gynandria Monandria*.

*Oncidium tricolor*. A very beautiful and entirely new species, with foliage resembling that of *O. triguetrum*, but very different in the flowers, both as to form and colouring, being elegantly varied with white and yellow, and blotched with blood-coloured spots. It was sent to the Royal Botanic Gardens of Kew in 1843, by their collector, Mr. Purdie, from Jamaica, and blossomed freely attached to a piece of wood in March and April of the following year. — *Bot. Mag.* 4130.

BEGONIACEÆ. — *Monacia Polyandria*.

*Begonia rubricaulis*. It is to be regretted that so many members of this highly ornamental genus of plants are introduced to our gardens without any record of their native countries; such is the case with the present species. The appellation given it by Sir W. J. Hooker is significant of the fine red colour of the flower-stalks, which, together with the glossy leaves and large rose-coloured and white flowers, renders the species peculiarly worthy of cultivation. It is in perfection during the summer and autumnal months. — *Bot. Mag.* 4131.

LYTHRACEÆ. — *Dodecandra Monogynia*.

*Cuphea strigulosa*. This is one of those plants which, though usually considered to require stove treatment, on experiment are found to succeed far better when grown in a cooler situation. *Cuphea strigulosa* in a stove is remarkable for its numerous airy-looking flower-bearing ramifications; yet the flowers individually are entirely devoid of interest, being of a pale greenish-yellow hue. But when grown in the open air this colour is heightened to a bright yellow, variegated with red; it is then, although not equal to some of the showy members of the genus, a very interesting species. It grows wild at the foot of the Andes, near Ibagué, and has only recently been introduced to this country through the Continental nurseries. — *Pax. Mag. Bot.*

ORCHIDACEÆ. — *Gynandria Monandria*.

*Epidendrum macrochilum roseum*. One of the most showy species of *Epidendra* that we possess is undoubtedly *E. macrochilum*. The large expansive white lip of the flower, so richly spotted with crimson in the centre, is especially interesting amongst the crowd of dingy bronzed flowers so numerous and common in the genus. Within the last two years several

varieties of this superior species, with rose-coloured blossoms of various shades, and with a slight dissimilarity in form, have been received through different channels from Guatemala. The present one was flowered by Mr. Carson, in the collection of — Farmer, Esq., of Nonsuch Park, near Cheam, Surrey. It is chiefly remarkable among other rose-coloured varieties in the form of the lip, which, instead of being saddle-shaped by the usual deflexure of the sides, is perfectly flat, exposing the entire surface to view. — *Par. Mag. Bot.*

TRIDACEÆ. — *Triandria Monogynia.*

*Orthrosanthes multiflora.* The earliest specimens of this interesting little plant known in this country were raised from seeds collected near Lucky Bay, in New Holland, by Mr. W. Baxter, about the year 1820. It does not appear to be yet very widely disseminated; certainly not to that extent to which its worth entitles it. The plant is a close-tufted, herbaceous, half-hardy perennial, rising to about a foot in height; and the inflorescence is just elevated to about the level of the tips of the leaves; it is borne on a spike, having several spathes. The flowers are brilliant azure blue; they are developed one at a time from each spathe; and as they are of considerable size, and the sheaths numerous, they make a good show. The flowers, however, do not remain expanded the whole day; they open early in the morning, and sometimes close soon after mid-day, but more commonly remain unfolded until three or four o'clock; the same blossom re-opens for several successive days, and there is always another ready to display itself as the first dies, till the whole have expanded.

An open loam and well-reduced leaf mould make an excellent compost for it; and it may be preserved through the winter in frames with the greatest ease; and when continued in such structures (kept rather close) till it flowers, it acquires a degree of vigour and health unknown even to the plants allowed to remain constantly in the greenhouse. — *Pax. Mag. Bot.*

LABIATÆ. — *Diandrion Monogynia.*

*Salvia strictiflora.* A shrubby species, with bright vermilion flowers, from Peru; it has been known in England for some years, but is somewhat scarce. It is a rapid grower, but does not usually flower freely. — *Pax. Mag. Bot.*

LIST OF ORCHIDÆ.

(Continued from Vol. V. p. 225.)

255. *Oncidium Cavendishianum.* Plant destitute of bulbs; leaves 1 foot long, and 6 inches broad; flower-spike, produced from the base, 4 feet long, and branched towards the summit; the sepals and petals are pale green, and blotched with brown; column yellow; labelum yellow. This species requires pot cultivation, with a free drainage, and a compost of turfy peat and sphagnum chopped together and mixed with small potsherds; it requires but little water while growing, and scarcely any while at rest; temperature during the first 65°, and the latter 55°. — *Native of Guatemala.*

256. *Oncidium Cavendishianum var. pendulum.* This species is so similar in growth to the other as not to admit of a description; the flowers are much the same, only produced on a pendent spike; and it requires the same treatment and temperature. — *Native of Guatemala.*

257. *Oncidium bicallosum*. Plant similar in growth to the above, though not so strong; flower spike 1 foot long, half pendent, producing from 16 to 20 flowers, each of which is nearly 2 inches in diameter; sepals and petals yellow, having a slight tinge of crimson round the margin, and undulated; the column is of a deeper yellow; labellum yellow also, and two-lobed, with a pair of distinct tubercles for its crest, these being separated by a considerable space. It may be grown either on a billet of wood covered with sphagnum, or in a pot with a good drainage, and a compost of turfy peat, sphagnum, and small potsherds; it does not require much water during any stage of growth. — *Native of Guatemala*.

258. *Oncidium Lanceanum*. Plant destitute of bulbs; leaves 18 inches long, and 8 inches broad, green, slightly spotted with purple; flower spike 3 feet long; the sepals and petals of the flowers are pale green, blotched with purplish brown; the helmet of the column a rich purple; labellum bright violet at the edge, the crest being of a deep purple. The plant is usually found in its native country flourishing on the Tamarind, Calabash, or Sapadilla. — *Native of Surinam*.

259. *Oncidium carthaginense*. Plant destitute of bulbs; leaves 18 inches long, and 6 inches broad; flower spike 6 feet long, and branched; sepals and petals green, spotted with dark brown; the labellum of a dull green, requiring the same treatment and temperature as *O. Cavendishianum*. — *Native of the West Indies*.

260. *Oncidium luridum*. This species is very similar to the last, except that its leaves are a little spotted, which is not the case with the other. The sepals and petals are green, spotted with brown; labellum of a more lurid green. It requires the same treatment and temperature as recommended for the others. — *Native of Trinidad*.

261. *Oncidium luridum var. guttatum*. This is a handsome variety with the habit of the species. The sepals and petals are orange-coloured, spotted with dark brown; labellum brownish yellow. — *Native of Jamaica*.

262. *Oncidium luridum var. guttatum olivaceum*. This is another handsome variety, and worth cultivation, the ground colour of the flowers being olive. The same treatment and temperature as for the others will do for this. — *Native of Jamaica*.

263. *Oncidium roseum*. Plant destitute of bulbs; leaves 1 foot long, and 6 inches broad; flower spike 5 feet long, and branched; sepals and petals pale brown, spotted with darker brown; labellum rose-coloured. This species also requires the same treatment and temperature as the others. — *Native of Mexico*.

264. *Oncidium sanguineum*. Plant similar in growth to the last; flower spike 6 feet long, and branched; the flowers are more of a rose colour than of a blood red, which its name would imply. It does not differ in regard to treatment and temperature from the others. — *Native of La Guayra*.

265. *Oncidium Henchmanni*. This species is of the same habit of growth as *O. roseum*, the flowers being more of a violet or rose-colour than the one just mentioned; the treatment and temperature being the same. — *Native of Mexico*.

266. *Oncidium altissimum*. Plant pseudo-bulbous; bulbs nearly 6 inches long, and 3 inches wide, rather flat, and slightly furrowed; leaves in pairs 18 inches long, and 2 inches broad; flower spike 12 feet long, branched nearly all the way; sepals and petals green, spotted with brown; labellum pure yellow, requiring pot cultivation in a mixture of turfy peat and potsherds, with a free supply of water while growing; temperature 70°. — *Native of the West Indies*.

267. *Oncidium Bauerii*. Plant pseudo-bulbous. The leaves of this species are more obtuse at the apex than those of the last mentioned, and the pseudo-bulbs are more lengthened; the flowers are of the same colour, except that the labellum is of a brighter yellow. It requires the same treatment and temperature. — *Native of South America.*

268. *Oncidium pubes*. A pretty little pseudo-bulbous plant; bulbs 2 inches long; the leaves are produced single; flowers produced on a short spike; sepals and petals brown, spotted with red; labellum yellowish brown, requiring pot cultivation, and the same temperature as the others. — *Native of Brazil.*

J. HENSHAW.

(*To be continued.*)

## CALENDAR FOR JANUARY.

As a slight notice of the indigenous vegetation of the British Islands can hardly be considered to be misplaced in a calendar like this, it is proposed to offer a few observations on the progressive appearance of our wild flowers. Such a subject, it is presumed, is of sufficient interest to merit a brief monthly notice.

At this dreary season of the year, a superficial observer would find but little in the fields and woods to attract his attention; but the more ardent enquirer into the secret ways of nature will find that much is to be observed, which will amply repay the time consumed in its investigation, by adding greatly to his store of facts, and by proving an incentive to still closer observation as the season advances, and the objects multiply. Few as are now the subjects in a perfect state, still some of the mosses, and other cryptogamic plants, will be found in fruit in fine open weather; the singular and often beautiful construction of these will merit examination. But perhaps among the most singular circumstances worthy of notice now are the curious bulb-like forms which several of our wild, fibrous-rooted herbaceous plants assume in winter: these *hybernacula* are composed of fleshy scales in the beautiful *Parnassia*, and in the butter-worts (*Pinguicula*); whilst in the bird's-eye Primrose (*Primula farinosa*), a mealy close-pressed ball of small leaves is formed in a similar manner. The affinity of these curious bodies with bulbs and tubers is sufficiently evident.

In the FLOWER-GARDEN little can be done, except in maintaining a thorough neatness, a point which cannot be neglected with impunity at any season. If the beds are filled with evergreens in the manner which has been recommended, either cut or in pots, the same neatness must be aimed at, or the garden will look worse when filled by such means than if the beds were empty, and merely raked smooth.

The GREENHOUSE, at this season the most interesting part of the garden, requires particular attention as regards temperature and moisture. Any excess of either will be highly detrimental: a temperature ranging between 40° and 50° is the most desirable; but moisture must be very sparingly applied, as it is always observed that a damp greenhouse is adapted to comparatively few species of plants. The admission of air should always be liberal, whenever external circumstances allow, care being taken to maintain the average temperature of the house, by the application of fire-heat, if necessary. The modification of these directions, to the safe keeping of plants in pits or other structures will be easy to the merest tyro.

In the management of the Stove the above hints must not be lost sight of; for although a greater heat must be maintained (from a minimum of 50° by night to a maximum of 65° by day), still this temperature is not sufficient to allow a very free use of water, without the risk of bad consequences. Even the orchidaceous house, in which moisture may be most freely applied, must now be kept comparatively dry; and if any of the plants should commence growing, they must be moved to the warmest and dampest part of the house, thus giving them individually all the assistance compatible with the health of the collection, as a whole. For, it should be borne in mind, that orchidaceous plants in their native habitats generally make their growth in the wet season, and flower in the drier periods of the year, when the greater heat and dryness are more favourable to the ripening and dispersion of their seeds.

D. M.





THE  
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FEBRUARY, 1845.

ON PICOTEES.

WITH AN ENGRAVING OF BURROUGHS'S LADY ALICE PEEL  
AND DUKE OF NEWCASTLE.

WE have this month the pleasure of introducing to our readers two flowers, the property of Messrs. Youell, nurserymen, of Great Yarmouth, which, if they do not quite realise our ideas of perfection, have at least sufficient claims on the score of usefulness, to render them desirable in all collections.

No. 1, *Lady Alice Peel*, has been grown and exhibited near the metropolis, through the past season, by a few of the principal growers, and has been pretty generally admitted to be an acquisition ; for, notwithstanding the great difference that exists in the estimation of a flower between the Northern judges and those of the South, the scarcity of good kinds in the rose-edged class is sufficient to insure a more favourable reception than would be awarded even to the same flower, if of any other colour : thus this variety, though not without its faults, must be grown till a better is produced, because it is what the florist terms a *useful* flower.

No. 2., *Duke of Newcastle*, is a light-edged purple, possessed of a finely formed petal, clear distinct margin, and of considerable substance.

Both of these are of greater depth and fulness than is usual with Northern varieties : they are seedlings of 1844, raised by the Rev. J. Burroughs, of Lingwood Lodge, Norfolk ; a gentleman who gives promise to rank among the foremost of

Picotee and Carnation cultivators. Perhaps never before was so much encouragement held out for the improvement of the Picotee as is apparent at the present time, certainly never in so judicious a manner ; and we are pleased to see that dealers are becoming more alive to their own true interests. Instead of, as used to be the practice, first supplying the amateur with a small collection, who buys for the pleasure of a little friendly rivalry with his compeers, and, in nearly all cases, expends on the improvement and enlargement of his stock three times the value of any prizes he may obtain ; instead of raising false expectations, and then damping the ardour of the beginner by competing with, and, of course, from the difference in numbers, beating him in all his attempts ; the dealer, forsaking that reprehensible practice, now finds it far more advisable to give rather than receive prizes. The inducement of a silver cup few can withstand ; and the grower who liberally offers it is as liberally rewarded, by the increase of orders received from those who otherwise become disgusted with a pursuit in which they meet with no success.

To all who grow or admire these flowers, the ensuing season promises to be one of no ordinary interest ; we hear of exhibitions to be held in all quarters, and arranged to suit all competitors. Besides the principal metropolitan show of the South London Floricultural Society, there is promised an increase in the prizes at Chiswick and the Regent's Park meetings ; and there are also, at least, a dozen other smaller societies located on all sides of town, to mention which and the provincial meetings talked of, is impossible, for their name is Legion. The best of the latter, in all probability, will be, that at the Coppice near Nottingham, and the proposed new one at Salisbury. " May we be there to see ! " — ED.

#### A FEW HOMELY REMARKS ON OUR HOME FLOWERS.

WITHOUT presuming to dictate what shall be admitted into, or rejected from general estimation, may I be allowed to offer a few remarks on behalf of some very humble favourites of mine, our native orchidaceous plants.

At the present time, *exotic* Orchidaceæ receive a very large proportion of the favours of the horticultural world, and I must allow, deservedly. Collectors are despatched to explore unknown districts in search of novelties to enrich the collection at home, with a spirit and energy that deserves the highest commendation. May every one who undertakes the arduous task, return successful! Knowing something of the enthusiasm that is now so prevalently attached to this the exotic class of the order, I am induced to consider it as the most fitting period at which an endeavour to direct some little attention to our native kinds can be made. Often have I bent over their fragile forms, and regretted they should be left to —

“ Blush unseen,  
And waste their sweetness on the desert air ;”

and I am positive, could your readers be induced to bestow only a small share of the attention now so liberally given to their exotic brethren, they would be found most grateful recipients. I am aware some little difficulty has been experienced in the attempts hitherto made to grow British Orchideæ; but, in this age of advancement, obstacles of this sort are regarded merely as incentives to further exertion, giving a tone to the renewed energy. Indeed, my love of these flowers makes me sanguine enough to believe, that not only may they be grown as they now are, but that, with patience and perseverance, a great improvement may be effected among them. Surely in this enlightened age, when floriculture is so rapidly advancing, it will not be admitted that these lovely things shall still live unnoticed, or that their improvement is an impossibility.

Let us think of the difficulties found when the culture of the exotic species was first tried, and then turn, to view, with admiration, the splendid objects that the same class of plants now presents: or, as a still more familiar instance, look at the beautiful varieties of the Pansy which now grace our floral exhibitions; thousands of varieties of them may be found, of as many shades of colour, from the deepest and richest purple to the most delicate and pure white, of approved form and texture; and, after acknowledging their eminent claims to beauty, we must recollect (for the sake of those on whose account I write) that all these are descendants of the little, ugly, despised wild pansy. Now, if we suppose that *Orchis fusca* could be grown

to double its present size (and what has been found possible in the case of the pansy may be in this), I know not what would equal a bed of it. *Platanthera bifolia* (the butterfly orchis) would also be a splendid object, could we introduce some gay colours into it. *Ophrys apifera* and *arachnites* command universal admiration even now ; and, were they only doubled in size, the admiration might well indeed be doubled.

I am not yet in a position to explain how all this is to be effected, nor shall I attempt it, my object being to endeavour to draw attention to the subject, which, beyond question, will occupy perhaps several years to accomplish fully ; but, without doubt, Mr. Thompson saved pansy seed many times before his Victoria opened her dark eye, and " beamed forth her beauty." How many Emperors, Grand Dukes, &c., have since been raised, and some of them eclipsing even that favourite, it is impossible to say ; but, with so promising an instance of the reward of perseverance before us, to say nothing of that indefinable pleasure arising from the almost creative power in thus originating new and interesting forms which the vegetable kingdom holds forth to our exertions, I do hope to find very many earnestly engaged in the culture of British Orchideæ, with the determination not to give it up till they have accomplished the end in view, which will be one of the greatest triumphs in the annals of floriculture.

R. KEELING.

*Elham.*

### PREPARATION OF COMPOSTS.

I AM often requested to give information as to the treatment of some florists' flowers ; but my invariable reply is, first show me your mould heaps ; and it is seldom I meet with what is absolutely necessary as a foundation for success. Let me give a few general hints upon this subject. Have an out of the way airy spot, and there collect upon occasions the top spit of a turfy loam ; with this mix, layer for layer, the wet litter and sweepings of the stable. Let it lie for some months, then chop it down small, and throw it into a heap. In frosty weather turn it over, and do this for a couple of years. Obtain from the cowman or the fields a load of cow-dung, and submit this to the

same treatment until it becomes simple black mould. Erect in some suitable place a little shed, open back and front for the free admission and circulation of air. Fit this up with some rough bins. Fill one with the turfey loam and dung when well amalgamated, as directed above—another with the old cow dung, —another with some good peat, not obtained any where or any how, but well selected, from its containing abundance of vegetable fibre. Now, here are the foundations for compost to grow any thing in. Some will say I have omitted leaf mould. Much as it will surprise many to hear it, I have no hesitation in saying I dislike it. I have always found it at every age the home of grubs and their larvæ, and I never find the plants root in it as well as in a proportion of such peat as above-mentioned. Let no one be deterred by imagining that the above arrangements will involve much expense, or be offensive to the eye of neatness. A few rough fir-poles will form the shed, and a very little contrivance will make it ornamental as well as useful,—covered, as it may be, by a honey-suckle or rose. When once a stock is obtained the florist will be sure to have his bins replenished as they are exhausted; and no one that knows the comfort and advantage of having a variety of soils ready for mixing for immediate use would give up the plan. I should add that a stock of the sharpest, cleanest silver sand that can be obtained should be at hand, and if kept covered over so much the better, especially if the spot be frequented by cats.

E. BECK.

*Isleworth.*

### HORTICULTURAL ESSAYS,

*By the Members of the Regent's Park Gardeners' Society.*

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### VEGETABLE PHYSIOLOGY.—THE LEAVES OF PLANTS.

By Mr. T. MOORE.

(Continued from p. 14.)

THE life of vegetables seems to consist in a successive diurnal decomposition and recombination of carbonic acid. During the

night they vitiate the air by robbing it of its oxygen ; by day they purify it, by restoring to it a new supply. It is an interesting question, whether or not this alternation leaves the atmosphere nearly in a state of equilibrium, or whether the proportion of oxygen becomes gradually increased ; that it does so is a prevailing opinion : in primæval ages it is conjectured that carbonic acid was present in excess, and that the action of vegetation has wrought the change we now perceive ; and if this be true, we can scarcely doubt but that the same causes and influences are in constant operation. When we consider the great loss of oxygen which is caused by the respiration of animals, and by its combination with various mineral matters, it would seem almost incredible but that the air should in time become so far deprived of oxygen as to be unfit for the maintenance of animal life, were we not to look for some ceaseless compensating action ; and by various experiments which have been made, it appears evident that the power of thus acting does reside in the vegetable kingdom.

Taking this view, plants may be regarded as a special provision of Creative Wisdom, by whose means the consumption of that which would render the world uninhabitable to man and the inferior creatures is secured ; and at the same time we may perceive that they have been so beautifully contrived, that their existence could not be maintained, except by their continually abstracting from the atmosphere those elements which, if permitted to accumulate, would endanger, if not totally prevent our own.

Some leaves possess the property of moving when acted on by certain bodies, and this is termed IRRITABILITY : it may be regarded as being particularly the result of vital action, and is illustrated by the circumstance, that when a vine-leaf is suspended from a string it turns towards the light just as when on the plant. The *Mimosa sensitiva* folds up its leaves when touched. The movements in the leaves of *Dionæa muscipula*, and of the species of *Drosera* ; in the capsular valves of *Impatiens* ; in the column of *Stylium* ; in the anthers of *Kalmia*, and of the common barberry ; and in the stigma of *Mimulus*, are some among the numerous recorded instances in which the irritability of different organs is evinced by the touch. Solar light, together with the atmosphere, also possesses great influence on the leaves of plants and their modifications, tending to induce

what is called the sleep of plants; the folding of the leaflets in many plants, and the opening and shutting of the blossoms in others, are all to be referred to the action of light and of the atmosphere. This phenomenon is moreover attested by the action of poisons on vegetables, which is similar to that produced on the animal structure; this has been frequently proved by experiment.

Spontaneous movement is another kind of irritability possessed by some plants: thus, in *Megaclinium falcatum* the labellum is almost continually in motion; and a kind of convulsive action of the same part may be observed in some species of *Pterostylis*; the filaments of *Oscillatoria* are constantly writhing like worms in pain; and in *Hedysarum gyrans* the lateral leaflets are in motion both day and night, even when the terminal one is asleep: the leaves of the aspen also furnish a familiar illustration of spontaneous movement, for, by a curious formation of the petiole, they can never rest, but are in constant motion.

The fall of the leaf is a phenomenon too important to be here passed over: it is explained by De Candolle, thus:— the increase of the leaves both in width and length, that is, their full expansion, is generally a rapid process; for a time the leaves exercise their varied functions, but all this while the process of denudation is silently going on. They exhale perfectly pure water, and retain in their tissue the earthy matter carried up by the sap; and in consequence of this the vessels harden and the pores become obstructed: this goes on during the season of their growth; and according as evaporation is more or less active, so are the leaves approaching the limit of their existence: they gradually dry up and die. But this death of the leaves must not be confounded with their falling, for the two processes are distinct: the death of the leaves results from the choking up of their vessels; they then change colour, cease to decompose carbonic acid and absorb oxygen, become unhealthy, and die; but the living tissue at their base still continues to increase in size, and thus the dead or dying leaves are, as it were, forced outwards and thrown off. Du Petit Thouars gives another explanation:— “If,” he says, “we watch the progress of a tree, we shall perceive that the lowest leaves fall first;” and this he explains thus:— “The base of every leaf reposes on the pith of the branch, to the sheath of which it is

attached; but as the branch increases in diameter by acquiring new wood, the space between the base of each leaf and the pith becomes sensibly augmented; and, in consequence, the fibres, by which the leaves were connected with the pith, must have necessarily lengthened, in order to admit the deposition of wood between the bark and the pith: the bundle of fibres being at first composed of spiral vessels only, it is easy to conceive that they will be susceptible of elongation by unrolling: the time will however arrive, when these vessels being entirely unrolled, are incapable of further elongation; and they will therefore, by the force of vegetation, be stretched until they snap: when this takes place, the communication between the branch and the leaves will be destroyed, and they will necessarily fall off." It seems, after all, most probable that it is to a combination of both these supposed causes, that we are to attribute the effects which are manifest in the phenomenon of the fall of the leaf.

## PRIZE ESSAY.

ON THE CULTURE AND FORCING OF  
ASPARAGUS.

By Mr. J. DAVISON, Gardener to Sir J. Guest, Bart.,  
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AMONG the many plants grown for culinary purposes Asparagus ranks as one of the first: it is not only valued as an early vegetable, but is highly prized on account of its nutritious qualities. It is hailed with pleasure when it makes its first appearance at table; and it is welcomed by the gardener as being his first spring crop. Through the many improvements that have arisen, and are still springing up, in the science of gardening, asparagus is looked on as a winter as well as spring vegetable. To grow it for the table in winter it must be accelerated by artificial means; and in bringing my plan before you, I do not boast of having any thing new to offer: it is the result of practice and experience alone that I lay before you, and I am convinced that if the directions are carefully attended to, they will yield the most satisfactory results.

The cultivated asparagus is the *Asparagus officinalis* of Lin-

næus. It belongs to the Linnæan class and order *Hexandria Monogynia*, and to the natural order *Asphodelæ*. It is indigenous to Britain, and is found on gravelly or sandy soil, situated near the sea. It is also common on the shores of the north of Europe; and in the south of Russia and Poland it is eaten by the cattle as grass. Like many other of our vegetables it has a very different appearance when cultivated from what it has when seen in its wild state. It has been in cultivation for an unknown period, not in Britain only, but over the continent of Europe, and in many parts of America.

The sort of asparagus at present most generally grown is known under the name of the *Giant*; but whether this is a variety or sub-variety of some other kind, or has been so named from having been grown in a situation favourable to excessive growth, I am not positively prepared to state. I think, in common with all the other so-called varieties, enumerated in the seed catalogues, it has originated under the latter circumstances.

**PROPAGATION BY SEEDS.**—Where a great quantity of asparagus is forced, it is requisite that there should be sowings and plantations made annually. The ground where the seed is to be sown should be in an open situation, and the soil of a light description, well enriched with some vegetable matter; and if sandy, so much the better. The seed should be sown in drills, at such distance apart that the roots of the plants in one row will not get intermixed with those of the others: the seed should be covered to the depth of one and a half or two inches. I recommend the month of April as the time of sowing; but the earliness or lateness of the season is in this, as in many other things, a good instructor. The reason why I recommend the seed to be sown in drills is, that it is preferable to its being sown otherwise, for the plants can be much more easily lifted, and with less damage done to the roots. The only care seedling asparagus requires during its first summer's growth is to keep it free from weeds; and when its growth is matured and well ripened, to cut it over close to the earth, and cover the drills with decayed leaves or other vegetable matter. In this state the plants must remain till the following spring: if then wanted for planting, the covering must be taken from them, and the plants carefully lifted; if not wanted till they are two years old, they must remain where they are; and after the covering is removed let there be a little fine soil thrown on the top of each

drill and gently raked over: this will protect the crown of the roots from the strong heat of the sun. Care must be taken when removing the covering not to damage the crown of the roots.

**CULTIVATION.—*Situation and Soil.*** The situation for growing asparagus must be of a light, dry, and airy description, and such that the sun may act upon it with all its influence. Seeing what its natural situation is, it would be at once obvious that it should have a light soil, affording little resistance either to the emission of roots or the protrusion of its stems: the soil should also be capable of both receiving and parting with water readily: rich, light, turfey soil, that would readily break or fall to pieces, is the best for such purposes; but it must have been cut at least one year before it is wanted for use, and it must also be well enriched with thoroughly decomposed horse or pig manure. I recommend the latter, it being a much stronger manure; and the asparagus plant being a gross feeder it will derive more nourishment from it than it would do from a manure of less powerful qualities. Bones have by some been recommended as a manure for asparagus, and in some situations there is not the smallest doubt but they would be highly beneficial; but never having seen them tried, I am not prepared to say they are good for the purpose mentioned.

Such a soil as that I have been describing is not always to be procured, and the asparagus must then be planted in what the garden affords. In such cases the ground must be trenched to the depth of two feet and a half; and at the same time a sufficient quantity of manure should be added to make the ground very rich. If the ground should have been long under crop, the addition of a small quantity of fresh turf, if it can be procured, will be highly advantageous. If the soil should be of a strong clayey description I would recommend to add to it at the time of trenching either sand, lime rubbish, or lime siftings; either of which will have the effect of keeping the soil open, and will assist it very much in parting with superfluous water: in all soils lime will be found useful, as asparagus plants root very freely in it.

Attention being paid to these circumstances, asparagus is one of the easiest of all vegetables to cultivate; but no art or skill will produce precisely the soil which is most favourable to its growth. This exists naturally in the fittest of all possible states, and it is in these situations only that the plant is to be obtained

in its greatest state of perfection. An eminent author has observed, that in the rich alluvial soil of Battersea, Mortlake, and other places around London, it is produced of such extraordinary size that one hundred and ten heads, in a state fit for the kitchen, have been known to weigh more than thirty-two pounds. There are those which think this gigantic asparagus to be a peculiar variety; but this is an error, for it has been ascertained that when removed to less favourable soils, it gradually loses its characteristic vigour, and degenerates into the common kind.

*Of Beds and Planting.* The ground having been prepared as already stated, it should be formed into beds four feet wide, leaving a space of not less than two feet between each bed for an alley: the beds thus formed out should have a strong stake put in at each corner to serve as a mark for the alleys; a small portion of soil should be thrown from the space upon the beds, and this being done, the whole should be gently trod with the feet, the beds raked over, and made as level as possible. In beds of this size, there should be three rows of plants, the outside rows being planted nine inches from the edges of the bed; when planted nearer than this, I am convinced that the roots get damaged, as they extend. I recommend plants of one or two years' growth, for planting; the latter are preferable, but the difference is but trifling: they should not, however, be older, for they are then apt to be much damaged at the roots in transplanting.

It is not requisite that I should give directions for planting, further than to state that the plants should be carefully lifted, avoiding to break the roots, and planting them again as quickly as possible; for by allowing them to become dry, much injury is done to them. The roots should be spread in each direction as much as possible, and the plants should be set in from two to three inches deep, and twelve inches apart in the row. I recommend March or April as the time for planting; but in this, as I have before stated, the season is the best guide: if the weather is dry, the plants should be watered to settle the soil about their roots. The only work subsequently required to be done is the same as that which I have directed when speaking of seedlings. From plantations thus made, a few buds may be gathered the second season after planting.

*Winter Dressing.* Beds planted as I have directed will

not till they are two years old require manure, or other stimulating matter; and for three or four years this will not be required to a very great extent. On the other hand, beds that are older will require manure to be given them in large quantities, in order to feed and support the roots of the plant, and to maintain the strength and vigour of the stems. The season for adding manure is in the autumn, at the time when the stems and seed are ripe: the stems should be cut as closely to the ground as possible, and the beds must be forked over, and the soil taken from above the plants as closely as they will allow without damaging the crown of the roots: this soil must be put in the alleys, and the bed must then receive a good covering of well decomposed manure. And here I may suggest that in order to make the whole look neat, the manure so added should be beaten down with the back of the spade, and a little soil added to the edges of the beds, which should then be cut off straight, and the alleys between them dug, throwing the soil into a ridge: this materially assists in keeping the beds dry during the winter.

*Spring Dressing.* As the spring in each succeeding year advances, the asparagus beds will want looking to; the roughest of the manure added in the autumn must be removed with a rake, and the beds lightly forked over, taking care not to injure the roots, then stretch a line from stake to stake at the corners of the beds, so as to keep the edges straight, and add some of the soil from the alleys to the top of the beds; this may be done to the depth of from six to nine inches; break it fine, and make the beds as level as possible: by adding the quantity of soil mentioned the asparagus will send up much stronger stems than when a less quantity is employed. Keep the beds clear of weeds; and should the spring be very dry, a little water will be found of great benefit in assisting the development of the shoots. The whole of the stems produced should be gathered while they are required; afterwards they must be allowed to grow undisturbed. The buds are generally cut when from four to six inches in length; the method of doing which it is not necessary to describe.

**FORCING.** — To have this excellent vegetable in winter, recourse must be had to artificial means for accelerating its growth; and by this means we can have it from November, till it naturally comes in the open garden through the sun's in-

fluence. To have it thus is nothing new, yet there are better means for effecting this, at the present day, than those formerly known and practised.

The usual method of forcing has been with dung-beds; but now the system of forcing in pits is beginning to become general, and is in every respect much better than the former. The pits can be erected at a moderate expense; and with a trifling additional outlay we can have asparagus during the whole of the winter: and I may here mention, that a few roots of Rhubarb may be introduced, which in the winter months is always an acquisition; and for small sallading, and other things which occupy but little space, they will be found very useful. It is not necessary that these pits should be formed with more than six or eight of the ordinary-sized garden lights; and where a general succession is required, there should be two such pits in use for that purpose. They should be heated with hot-water pipes or smoke flues: hot water is the best, and by adopting it the two pits may be readily heated from one boiler, with the necessary stop-cocks. The pits should be so constructed that the plants will be near the glass, that they may enjoy the benefit of the sun when in a growing state; this is a particular point to be noticed in forcing Asparagus as well as other plants.

The roots to be forced should at least be six years old, and such that have sent up strong stems the preceding summer: the plants thus selected and intended for this purpose should either be covered with rough litter to prevent the frost entering the ground where they are; or otherwise they should be taken up, and deposited in sand, where they will not become too dry. In the pits, when prepared for them, there should be three or four inches of soil placed: the roots of the plants should as much as possible be preserved at the time of lifting, and they should be placed in the pits as level as possible: then, with a sieve, sift among the roots some fine soil, decayed tan, leaves, or any thing that is light, and will readily fall in among them; this must be done to the depth of four or five inches; then give the whole a good watering to settle the soil; close the pit, and keep it so, till vegetation commences, and then air must be admitted freely, and all the light that can possibly be secured: this materially assists in getting the buds of a fine green colour and good flavour. The temperature of the pits may range from

45° to 60° Fahrenheit; but I recommend 50° and 55° as the highest, unless it is required to provide a supply for some particular day. Where pits are heated by hot water, it is an easy matter to steam them, which is highly beneficial when the plants are in a state of vegetation. Thus managed, the plants require but little water, particularly in the winter months; but it must be borne in mind that when it is required and applied, it must be of the same temperature as the pit in which the plants are growing. Where a general succession is wanted, this method will be found to answer: a fresh plantation must, however, be made about every twelve or eighteen days. It is not necessary in forcing Asparagus, that it should have bottom heat; but where a small quantity is required, it is often forced on dung beds, and in such cases I would advise the grower to be cautious against a strong bottom heat, which, accompanied by the steam from the dung, is injurious to the plants when in a growing state. Where it is wanted, even in small quantities, I strongly recommend the frame to be placed on brickwork, with pigeon-holes in it, as recommended by M'Phail: and the bottom may be covered with slate or bricks, and thus the steam will entirely be prevented from getting among the plants. If the cultivator of Asparagus will attend to the above hints, he will find the result will give entire satisfaction,—the whole being the result of experience.

July 13th.

## LIST OF ORCHIDEÆ.

(Continued from p. 19.)

269. *Oncidium deltoideum* (from the Greek *delta*, the lip being of a triangular form). Plant pseudo-bulbous; bulbs 3 inches long, of a pale green; leaves in pairs, 18 inches long, and a quarter of an inch broad; flower-spike 3 feet long, and slender; the sepals and petals yellow, with a small spot of brown in the centre of each; labellum yellow, with a blotch of brown. This species requires pot cultivation in a mixture of turfy peat, a little sphagnum, and small potsherds, and a good drainage. Water to be given, but moderately, in a temperature varying from 65° to 70°. — Native of Peru.

270. *Oncidium incurvum* (from the floral organs being curved backwards). Plant pseudo-bulbous; bulbs a little grooved, 3 inches long, inclosed in two pairs of leaflets; leaves in pairs, 16 inches long, and one inch broad; flower-spike 2 feet long, and branched; the sepals and petals of the flowers white, intermixed with deep lilac; column erect, white; ears small; labellum

white, with the breast blotched with deep lilac. This species requires pot cultivation in a mixture of turf peat, sphagnum, and small potsherds, with a little elevation and a free drainage, as it requires to be freely watered during the growth; if in robust health, the temperature should range from 60° to 70°. — *Native of Mexico.*

271. *Oncidium tetrapetalum* (from *tetra*, four, and *petalon*, a petal). A most beautiful little species well deserving a place in every collection; the flowers are produced on a short spike; the sepals and petals white, spotted, streaked, and barred with brown; column white, with two large spotted ears; labellum white, with the base yellow and brown, as also in each division at the base. This species may be grown on a log of wood covered with sphagnum, or in a pot with a mixture of turf peat, sphagnum, and small potsherds, and but a slight watering; temperature, 60° to 70°. — *Native of Jamaica and Cuba.*

272. *Oncidium iridifolium* (pigmy Oncidium). This is a very curious and extremely small species, the leaves being scarcely 1½ inch long; the flower-stem is little more than 2 inches long; the flowers small, but very neat and pretty, being about three parts of an inch across, yellow, streaked with red. This species should be grown on a log of wood covered with sphagnum. Very little water will be required, as it likes a dry situation exposed to the sun; temperature, 60° to 70°. — *Native of La Guayra.*

273. *Oncidium tricolor* (three-coloured). Plant destitute of bulbs; leaves 6 inches long, triangular shaped, with a few faint spots of red towards the base of each; flower-spike from 8 to 12 inches long, branched; the colour of the flowers beautifully varied with yellow and white, and occasionally blotched with blood-coloured spots. This species will succeed either on a log of wood or in a pot sufficiently drained, in a mixture of turf peat, a little sphagnum, and small potsherds, at no time requiring much water, and a temperature of 65° to 70°. — *Native of Jamaica.*

274. *Oncidium pulvinatum* (cushion lip). Plant pseudo-bulbous; bulbs nearly flat, with two sharp angles; leaves 10 inches long, and 3 inches broad, crisp, erect; flower-spike 7 feet long, with numerous side branches; the sepals and petals of the flowers brownish yellow; labellum winged, yellow, spotted with pale brown. This species requires pot cultivation in the usual mixture, with a slight elevation, and a liberal supply of water during its growth; temperature, 65° to 70°. — *Native of Brazil.*

275. *Oncidium unicorn* (the breast of the labellum having only one horn). Plant pseudo-bulbous; bulbs 2 inches long, a little grooved; leaves mostly single, 6 inches long, and 1 inch broad; flower-spike from 6 to 9 inches long; flowers pale yellow, with a blotch of pale brown on the labellum. This species may be grown either on a log of wood or in a pot well drained, with the same treatment and temperature as for *O. tetrapetalum*. — *Native of Brazil.*

276. *Oncidium crispum* (curled lip). Plant pseudo-bulbous; bulbs 3 inches long, 1 inch broad; leaves in pairs, 8 inches long, and nearly 3 inches broad; flower-spike from 2 to 3 feet long; each flower is two inches across, and of a handsome dark chestnut colour; a single specimen when well grown will produce from 50 to 60 flowers. There are also two or three varieties of this species. It should be grown in a pot, well drained, with the same treatment and temperature as for *O. deltoideum*. — *Native of Brazil.*

277. *Oncidium Cebolleti*. Plant destitute of bulbs; leaves of a rush-like form, slender, and about 18 inches long; flower-spike 2 feet long; flowers yellow, slightly spotted with reddish brown; treatment and temperature the same as *O. crispum*. — *Native of Demerara.*

278. *Oncidium junceum* (rush-leaved). Plant destitute of bulbs; leaves 1 foot long; flower-spike 8 inches long; the sepals and petals small; colour

brown, veined with green; labellum large and yellow, with the breast spotted with red. This species requires the same treatment and temperature as *O. Cebolleti*.—Native of Demerara.

279. *Oncidium longifolium* (long leaved). Plant destitute of bulbs; leaves 3 feet long, rush-like; the colour of the flowers is but little different from *O. Cebolleti*, and it requires the same treatment and temperature.—Native of Demerara.

280. *Oncidium ascendens*. This may be considered only a mere variety of *O. Cebolleti*, with its flowers in a more dense mass; its treatment and temperature being the same.—Native of Guatemala.

281. *Oncidium disticatum*. (Flowers straggling.) Plant pseudo-bulbous; bulbs much like *O. pulvinatum*; leaves thick, nearly oval, terminating with an obtuse apex; flower spike from 1 to 2 feet long; sepals and petals a fine bright yellow, coloured deeply at the base with orange red; labellum large, flat, lobed, and notched, yellow spotted with dark crimson; treatment and temperature the same as for *O. pulvinatum*.—Native of Brazil.

282. *Oncidium pulchellum* (pretty). Plant destitute of bulbs; leaves similar in form to those of *O. tricolor*; flower-spike 6 to 9 inches long; the sepals and petals pure white; column white, with a slight tinge of rose; labellum white, with a slight tinge of orange at the base. This species requires the same treatment and temperature as recommended for *O. tricolor*.—Native of Jamaica.

283. *Oncidium variegatum*. This species is not very showy; the raceme is terminal, and contains from 8 to 12 beautiful flowers of a greenish yellow colour, spotted with dark brown. It requires pot cultivation, with a free drainage, and a mixture of turfy peat, sphagnum, and small potsherds, with a temperature of 65° to 70°.—Native of Guatemala.

J. HENSHALL.

(To be continued.)

## LIST OF NEW PLANTS.

### LILIACEÆ.—*Hexandria Monogynia*.

*Lilium Thomsonianum*. A native of Mussooree, one of the northern provinces of British India, where it was found by collectors employed by Dr. Wallich, who regards it as a lily. Professor Royle afterwards referred it to *Fritillaria*; but its floral leaves have not the honey-pore which is essential to that genus. In fact, it is far too near in structure to the common white lily to allow of its being distinguished generically. Its delicate rose-coloured flowers offer, however, a very marked feature of distinction. The character of the plant is that of a handsome half-hardy bulb, requiring the same kind of treatment and soil as *Tigridias*. Messrs. Loddiges flowered it in a greenhouse in April, 1844. — *Bot. Reg.* 1—45.

### EPACRIDACEÆ.—*Pentandria Monogynia*.

*Epacris miniata*. This beautiful plant was raised from New Holland seeds by Messrs. Loddiges. It is a dense flowerer with blossoms somewhat smaller than those of *E. grandiflora*, but perhaps still more brilliant in colouring, the bright vermillion tube being so elegantly contrasted with the snow-white limb. It is probably a variety of *grandiflora*, and requires a similar treatment. — *Bot. Reg.* 5—45.

### OLEACEÆ.—*Diandria Monogynia*.

*Syringa Emodi*. This Himalayan lilac has been raised in the garden of the Horticultural Society, from seeds received from India. It is a fine

hardy dwarf shrub attaining the height of from 3 to 5 feet, and growing freely in any good garden soil. Its flowers have much the look of Privet, and are wholly destitute of the sweet perfume of other lilacs; instead of which they have a heavy unpleasant smell: they are produced in the month of April in the open ground. One thing peculiar to this plant is the property of producing pale pustule-like callosities on the branches, which gives them a singular appearance, and the segments of the corolla have an abruptly inflexed point. — *Bot. Reg.*

**NYMPHÆACEÆ. — *Polyandria Monogynia*.**

*Nymphaea rubra*. Few, if any of the tropical kinds of the fine family of water lilies, are more specious, or admit of culture more conveniently, than *N. rubra*. The flowers certainly are a little inferior in dimensions to those of some of its congeners; but the intensity of their rich crimson-purple petals, and the smaller and less exuberant character of other parts, is more than a sufficient compensation. It is an Oriental species, existing plentifully in Hindostan, where it is found growing in pools of fresh water, and not unfrequently in gently flowing rivers.

The stem grows horizontally amongst the mud, and the leaves are elevated on long stalks so as to float on the surface of the water. The plant was introduced by Sir Joseph Banks, about the beginning of the present century. — *Pax. Mag. Bot.*

**MELASTOMACEÆ. — *Decandria Monogynia*.**

*Pleroma petiolata*. This plant is a strong-growing stove shrub, generally rising three or four feet high; the branches are well furnished with handsome foliage, of the same soft velvety character, so frequent amongst Melastomaceous plants; the flowers are large and showy, of a bright purple colour, arranged in large terminal panicles: they continue to be developed in succession for a considerable period. It was first known in Britain through plants in the Edinburgh Botanic Garden, which were procured in 1836 from the Botanic Garden of Berlin. Sir W. J. Hooker suspects it to be synonymous with *L. Maximiliana*, a native of the provinces of Saint Paulo and Saint Sebastian, in Brazil. — *Pax. Mag. Bot.*

**ORCHIDACEÆ. — *Gynandria Monandria*.**

*Eria vestita*. A species with the habit of a *Dendrobium*, sprinkled over with reddish-brown hairs; both in the stems and the thick coriaceous leaves the flowers are produced on a loose raceme; the outer side of the sepals is ferruginous, and the inside and petals white: it is remarkable, but not handsome. — *Bot. Reg. 2—45.*

*Epidendrum dipus*. One of those innumerable species inhabiting South American forests, to the enumeration of which there seems no end. It was imported by Messrs. Loddiges from Brazil, and produced its densely clustered panicles of sweet-scented green, brown and white flowers in January. In many respects it approaches *E. nutans*, but its panicle is very much more compact; its colour is more like that of *E. paniculatum*, and the form of its lip is different, the two terminal lobes being very narrow, and bowed back, like the fore-legs of the splay-footed truffle dogs. — *Bot. Reg. 4—45.*

**RUBIACEÆ. — *Pentandria Monogynia*.**

*Luculia Pinciana*. A new and extremely beautiful species, excelling even the much-admired *L. gratissima*, both in the size and delicacy of its flowers and in their powerful, yet agreeable, fragrance. In stature and general aspect the two appear to accord, but the present has broader and shorter leaves, with much more compact (closely-placed) nerves, and the limb of the corolla has five pairs of prominent tubercles, one pair at the sinus of each lobe. The flowers are arranged in large cymes, at the ends of rather small leafy branches, which spreading, and, as it were, uniting, form one compound cyme, a foot or more in diameter, composed of large (and on the upper side) pure white

blossoms, of the most delicious fragrance, changing, however, in age to a cream or ivory colour, tinged with blush; the outside deep blush, and the tube red.

It was raised from seeds received from Nepaul by Mr. Pince, at his nursery, Exeter, and is cultivated in the greenhouse. — *Bot. Mag.* 4132.

MYRTACEÆ. — *Icosandria Monogynia*.

*Backhousia myrtifolia*. This pretty greenhouse shrub, its conspicuous petaloid calycine segments giving the idea, at first sight, of large corollas to the flowers, was found by Mr. James Backhouse in the Illawara district of New South Wales. It is a plant with the general appearance of a Myrtle, bearing yellowish-white flowers, and may be treated in the same manner. — *Bot. Mag.* 4133.

MALVACEÆ. — *Monadelphia Polyandria*.

*Sida graveolens*. A handsome species, with soft pale-green foliage, and yellow flowers, with a deep blood-coloured eye. It is a native of the East Indies and of Jamaica, whence seeds were sent by Mr. Purdie to the Royal Gardens, Kew, which produced plants that bloomed in 1844. It bears a distant resemblance to *Abutilon striatum*, though not quite so handsome. — *Bot. Mag.* 4134.

TURNERACEÆ. — *Pentandria Trigynia*.

*Turnera ulmifolia*. There are in the West Indies two striking varieties of *Turnera ulmifolia*; one is already figured in the present work, under the name of *T. angustifolia*. The much finer state, and that which is considered the type of the species, is that now given, drawn from the rich collection at Syon Gardens. Its seeds were sent over by Mr. Purdie; and its very showy flowers and ample glossy foliage were in perfection in the stove, in July, 1844. It appears to be a plant well deserving of cultivation, but of short duration, requiring to be renewed from seed. It is a strong-growing, spreading plant, with herbaceous stems, having large, alternate, broadly-lanceolate, oblong leaves; these are rather flaccid and pendent: the flowers are solitary, composed of five nearly-round, spreading petals, of a full yellow, and are very showy. — *Bot. Mag.* 4137.

## TO CORRESPONDENTS.

THE RANUNCULUS, *Sir John Graham*. — Since our last we have written to Mr. G. Lightbody, of Falkirk, the raiser of this flower, who, in reply, says that our correspondent "H. H. D.'s" description is correct, and that we are quite right with respect to the name; as to the derivation of it, he says, "There are three different tombstones erected over each other in the church-yard here, in memory of this hero. On the most ancient the name is "Sir John de Greame"; on the modern one "Sir John Graham."

VIOLA. — In our opinion, assisted by that of a first-rate cultivator of this favourite, the following twelve Pansies may be considered indispensable: — Cook's Alicia, Welsh's Blue Perfection, West's Conqueror, Brown's Cotherstone and Countess of Orkney, Cook's Delight, Forsyth's Dr. Horner, King's Exquisite, Thomson's Lilac Queen, Fryer's Standard, Brown's Maid of the Mill, and Thompson's Pizarro.

T. JACKSON. — It is sometimes practised by florists who desire to increase their stock unduly, but the result is generally puny, unsatisfactory plants.

A SUB. — The effect of late planting on tulips is usually a finer strain in the flower, at the expense of the root; your seedlings will probably break a year or two sooner through its adoption, but be careful of them afterwards.

CANTAB. — The article on Lilliums next month.

FLORISTA. — The following Verbenas will afford a considerable diversity

of colours, and are not expensive:—Boule de Feu, bright scarlet; Chandlerii, deep crimson; Walton's Emma, deep lilac; Taglioni, pink and white; Queen, pure white; Zeuxes, scarlet and white; Blue Queen, bluish lilac; Burleyana, rose; Triumphans, deep red; and Rosea alba.

If *FLORA LONDINENSIS* will send directions to our office, we can supply the address of a person who manufactures Wardian cases at a more reasonable rate than those mentioned by our correspondent last week.

**ERRATUM.**—A typographical error occurred in our last—the paper on Orchards was written by Mr. E. *Bray*, not *Brag*.

### CALENDAR FOR FEBRUARY.

THE British flora affords but few flowering plants so early as this month, but on warm banks, and in other favoured spots, several of the more common weeds may be found expanding their blossoms in mild weather. As a means of obtaining an extended knowledge of the very varied forms under which vegetable vitality is developed, the botanical amateur should not fail to examine the cryptogamic plants, which are so easily met with during all periods of the year, but more particularly now, ere the sun has acquired sufficient power to dissipate the moist condition of the earth and atmosphere in which they particularly luxuriate. The various arrangement of parts in the different tribes, from the simple forms assumed by the lower genera of *Algæ* and *Fungi* to the beautiful organization of various *Jungermanniæ*, and onward still to the complex structure of the mosses, cannot fail to excite admiration, when we consider that the numberless plants in these orders are formed of cellular tissue alone.

If the weather be open the operations in the flower-garden will become numerous: thus dressing lawns, edgings, walks, &c., and the planting of hardy shrubs and herbaceous plants, preparation of borders, and other routine work, should be persevered in as far as weather will permit. A point of some importance, in consequence of the mild weather in January, will be the protection of tender roses, and various other plants, in case of a return of cold weather, or of very cutting winds. Many plants, especially many of the new species of *Pinus*, and allied genera, particularly require protection when making their first growth in spring; for although hardy enough to stand unprotected through the winter, they are very liable to sustain injury in consequence of the early period at which they commence their growth.

The Conservatory should receive all the air consistent with

the weather outside; for as more watering will have to be done as the plants gradually develope their growth, so should all opportunities be taken to admit air to dry up any excess of moisture: this may also be occasionally assisted by fire-heat *in the day*. All plants intended for bedding out should be frequently looked over, cleaned, watered when necessary, and towards the end of the month slightly encouraged, to accelerate their growth. The temperature should average slightly above last month; but the progress of the season will be the best indicator by which to regulate the heat in plant structures of all kinds.

In the stove the temperature should be gradually raised as the plants exhibit symptoms of renewed growth; but not to an extent so great as to endanger the plants by checking their advance in case of a return of wintry weather. This must be particularly observed with Orchidaceous plants; for if the young pseudo-bulbs are once checked in their development no after management during the season will repair the injury they will sustain, and a second growth must be patiently waited for.

D. M.

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ing -  
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comp  
show* **FLORIST'S FLOWERS.**—The early part of this month is generally received as the most proper time in which to top-dress and otherwise prepare Auriculas for the approaching blooming season. To do this remove about an inch and a half of the old soil from the surface of the pots, and replace with a mixture somewhat richer than that in which they are growing; thoroughly decayed sheep or cow dung and leaf mould, in about equal quantities, is a safe and efficacious application. Night soil, blood, and other strong manures are sometimes used, but they are dangerous in the hands of the inexperienced. While going over the plants for this purpose, carefully examine the drainage of each, that there may be no impediment to the passage of water through the soil during the summer, when it becomes necessary to supply it more abundantly; and now as the flower stems are rising they must be protected from frost: cover them up carefully on every recurrence, but give plenty of air in fine weather.

Tulips also, as they appear above ground, should have protection, and attention should be directed to the removal of cankered parts wherever and whenever they appear. Frequently turn the soil intended for Carnations and Picotees, and keep the plants free of insects by fumigation, &c.





*ANTIRRHINUM*

1	BRIGHTII	—	3	LUTEA
2	VENOSA	—	4	ATHROSPIRATUM

THE  
FLORIST'S JOURNAL.

MARCH, 1845.

ON ANTIRRHINUMS.

WITH AN ENGRAVING OF FOUR SEEDLING VARIETIES.

WHO that has ever enjoyed the romantic pleasure of a stroll amid the ruins of some old monastic edifice, or strayed over the grass-grown ramparts, or climbed the almost inaccessible keep of a decayed baronial residence — once the castle of some “Lawless Lord,” now, like its owner, crumbling to dust — but has beheld, with mingled feelings of serious sadness and delight, the curious appearance of these plants intermixed with wall-flowers and stone-crop, jutting out from among the joints of the stoutest masonry — heightening the evidence of the instability of human efforts, by the striking contrast presented in the freshness of nature flourishing on the decay of art? Seen thus among the imposing relics of past grandeur, in a state of native wildness, the mind, for relief, is led to compare them with their own progeny when taken into the care of the culturist, and the difference visible in the two stations is most flattering to the assiduous, patient, and persevering endeavours that distinguish the latter: a brilliancy and variety of colouring, together with an increase of size and vigour both in the flowers and the plant itself, is perceptible enough to render it a matter somewhat difficult of conception to the common observer that flowers like those portrayed should spring from so diminutive a stock: yet such is their origin!

## THE "SPOT" ON PELARGONIUMS.

WE have received many letters on this subject since we mentioned it in last Volume, several of them containing excellent, though speculative, ideas on the matter. The following deserve particular attention, as they convey sound information and very correct suggestions, backed by the experience necessary to the management of large collections; for the writers are known to us as very eminent growers of Pelargoniums.

"I have never had it in my collection: that I do not wish it, every one will believe. I have long held the opinion that it arises from a check to the circulation from too sudden alteration of temperature by the admission of cold air upon the plants. I once had more specimens than I required, or, indeed, than my house would hold. With a desire to reserve them for a late blooming, I placed them at the back of the greenhouse, upon a shelf two feet above the ground. It was the latter end of April, or beginning of May. In a few days all the foliage was spotted, as much so as any I had ever seen. Many eminent growers attributed it to an excess of moisture in their houses, and banished water from their cisterns. My own tank, with a surface of 32 superficial feet, always remains uncovered without any ill effect. Yet there was one plant, 'Foster's Beauty,' I could never grow without the foliage being disfigured in spite of every experimental attempt to avoid it. Distinguished from *the spot* is a similar disease to which *seedling* Pelargoniums are subject, which I shall term the canker. It commences on the stem, or on the termination of the foot-stalk at the stem. In some instances it spreads over the surface of the leaves, but more frequently affects the parts mentioned until late in the season, when the whole plant is a mass of disease; the stem cracks horizontally, and the leaf-stalk snaps like glass. Still the roots are quite healthy and vigorous. For this I know no remedy, or even palliative.

EXHIBITOR."

"Last season introduced me to a knowledge of this pest, which may be well designated 'a plague-spot.' I have grown Pelargoniums for the last fifteen years, but never suffered from its effects till the time named, when it came upon me with a vengeance. The season, if you remember, was an alternation

of excessive heat and dull weather, occasioning much trouble to the plant-grower. My plants were in a vigorous condition towards the close of the autumn, but shortly after exhibited an unhealthy aspect, followed by unequivocal symptoms of 'spot,' which continued throughout the growing season. I attribute the disease to the sudden reversion of atmospheric influences (changing from bright to gloomy) acting upon the elaborative organs of the plants in the manner of a check, so as probably to cause a disruption of some of them. I am not quite prepared to say it is infectious, but strongly suspect it.

"C. C."

G. writes thus:— "My opinion of the 'spot' is that it is caused by the chilling effects of a fluctuating atmosphere; the plants being excited to the utmost one day, and perhaps the next subject to precisely the reverse. It is only to be obviated by endeavouring to preserve an even temperature in the house, not that it is to be regulated entirely by the thermometer; for it is of less consequence to maintain at all times the same degree of heat than to have a more regular amount of moisture present in the atmosphere in which the plants are growing."

Another correspondent, Mr. Wilson, says, he believes "the 'spot' on Pelargoniums to originate in this way. The plants, in all probability, about the end of September, or even a week or two later, are making an abundance of new foliage, in fact, are in very active growth, and the possessor is flattering himself that his plants will 'look well' through the winter, and thus encourages them to a continuance of this growth, without at all thinking of the necessity of getting the new parts matured and hardened; the fine weather of the season all the time urging the plants forward, until at last the dull cold weather of November overtakes them in a green succulent state; their vessels are full of crude undigested sap, which they are unable to disgorge from want of sunlight, and it necessarily becomes stagnant and putrid, breaking through the epidermis like a cutaneous disease. Nearly the same result will follow an overdose of food at any season, accompanied by a reduction of light or temperature—as may be proved by experimenting on a worthless plant at any time."

All these opinions seem to coincide in the importance of attaining a proper maturity for the growth of the preceding

season before the arrival of winter: a continuance of the warm ripening weather of autumn is wanted as far into the winter months as possible, as it appears that the commencement of dull weather is the period at which the disease makes its first attack; and could it then be repelled, there seems but little danger to be apprehended from it when the return of spring shall have infused new vigour to the plants: not that they are to be kept so warm as to induce much growth, rather the contrary; for then they would be easy victims, being predisposed to any and all diseases; but with a delightful, dry, ripening (we cannot use a better term) atmosphere, such as is usually experienced in August, it is but reasonable to suppose they would pass through the winter in perfect health, acquiring an energy which, on the first application of stimuli in spring, would burst forth with astonishing strength. We are quite convinced that in the management of plants generally, far more depends upon their condition at the return of winter than at any other time; and the most strenuous exertions should be used to have all their several parts perfectly matured before the proper season for its completion leaves us.

EDITOR.

### HORTICULTURAL ESSAYS,

*By the Members of the Regent's Park Gardeners' Society.*

### GLEANINGS ON THE CULTURE OF THE CUCUMBER.

By Mr. T. MOORE.

THE kind of structure which I regard as being the best suited for the successful cultivation of the Cucumber, is such an one as that represented in the accompanying engraving. I might say much of the advantages to be derived from cultivating this plant in small houses, in preference to frames and pits, were it not that these arguments are so well known. That it can be induced to grow as freely, and as satisfactorily, in a small house, as in frames or pits, is a question which does not admit of doubt; and it is no trifling degree of advantage, to be able to secure such satisfactory results, and yet be able to dispense with the

labour, and filth, and uncertainty, which is attendant on the use of casings of fermenting material, as a means of maintaining a requisite degree of heat: when we consider the advantage of being able to bestow that degree of attention to the plants which they require, without exposing them to the influence of a rush of cold air, as is the case when the lights of a frame or pit are opened, we have quite enough before us to establish the preference of a small house over a dung-bed, and moreover, over a pit, even though the temperature of this latter is maintained by means of a hot-water apparatus. Neatness, economy, convenience, and certainty, are the advantages gained by employing a pit so heated, over that of using a structure in which the temperature is maintained by the aid of fermenting masses; whilst a still greater degree of certainty, and also of convenience, are the particulars in which small houses may be regarded as being preferable even over pits.

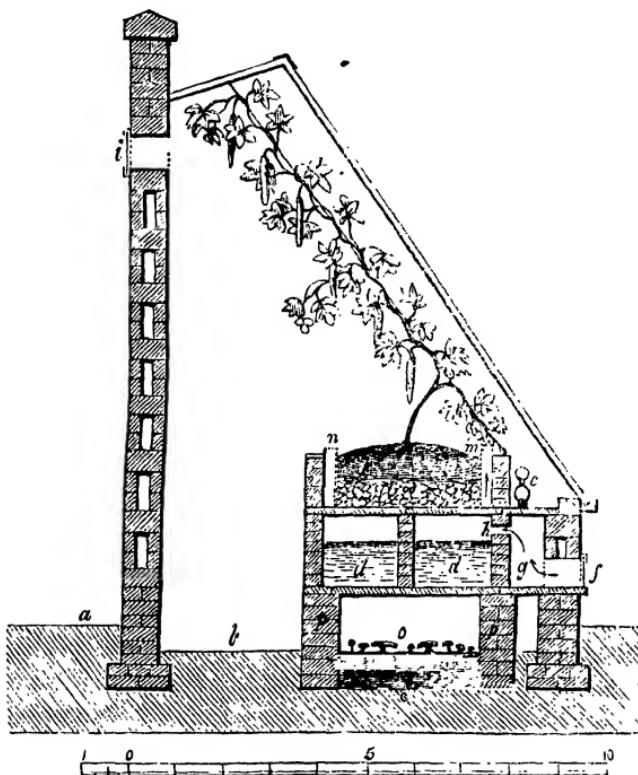
With regard to the question of heating, the gutter and the tank system are both valuable, the latter especially, as a means of securing an equal and genial degree of warmth to the roots. With the use of fermenting masses they admit of no comparison whatever, being infinitely preferable. It must not, however, be supposed, that the heat thus conveyed to the atmosphere, is in itself more suited to the plants to which it is applied, than that supplied by other means,—for heat, that is, simply caloric, is the same in its effects whatever may be the source through which it is derived; and consequently, heat imparted from fermenting manure is as good for the purpose as that derived directly from fire through the medium of a body of water; in one sense, it is even preferable, for ammonia, combined with other gaseous bodies, is contained in the vapour of fermenting manure, and this ammonia is of considerable value to plants when it does not exist in excess. The value and importance of the tank system consist in the uniformity of its action; for when once heated, a body of water such as that employed is found to maintain, with little trouble, and by the application of very slight stimulating power, a constant and genial degree of warmth; whilst, on the other hand, fermenting masses are, from their very nature, both fluctuating and ephemeral in their action; and, setting aside altogether the labour attendant on the employment of them, we have at once before us, in this particular, a proof of their decided inferiority to the tank. Cultivators know full well that in

rigorous weather, when the heat of their dung-casings is declining, they are, as it were, almost at the peril of their plants, dared to touch it, for fear of increasing the evil; they know at any rate that if, at an immense sacrifice of labour, they do succeed in replenishing it piece by piece, it is at least two or three days before it is again in a proper and effectual state of action; and even this period will be lengthened, if they have not on hand a plentiful supply of materials *ready for use*: they must know likewise, even though they may never have had the benefit of experiencing it, that a fire could be made up, and would produce the effect required, by means of the tank, in as many hours as it would take days to do so by following the old plan. And mark this — for it is a point of the utmost importance — the tank system will effect this: thus much can now be very safely asserted.

We sometimes hear of the more humid kind of heat given out from hot-water pipes than is the case with other appliances, such, for instance, as a flue. It is not unfrequently asserted, that the heat thus imparted is so moist, so genial, so peculiarly adapted to plants. Without doubt, the heat thus obtained is infinitely more suited to the development of plants than that derived from a flue: but its superiority consists in its purity, that is, its freeness from noxious gases, and not in its possessing a greater degree of moisture; the pipes are composed of a material not to any extent porous, and they give off the caloric only, which is transmitted from the fire to the water, from the water to the pipes, and from these latter to the atmosphere; it is next to impossible to conceive any thing more thoroughly devoid of moisture than the heat thus communicated to the atmosphere. On the other hand, flues are constructed of porous materials, and smoke, which contains a considerable portion of the elements of water, penetrates more or less through them, and thus the heat imparted from a flue, except where it is in immediate vicinage to the furnace, or direct source of caloric, will be found to be certainly not less, but in a degree more, humid than that from hot-water pipes. Its impurity, however, renders it far less desirable; for moisture can be added to the dry heat of hot-water pipes.

The engraving will perhaps be rendered more intelligible by a few descriptive remarks, in addition to the reference to the letters. First, I would say that the house should be provided with a tank near the front, in which a circulation of

heated water would supply a genial warmth to the soil and the roots: attached to the same boiler which heated the water



*a*, Ground level. *b*, Pathway. *c*, Lowest point excavated, on which a bed (*o*) may be made for rhubarb, &c. *d*, Tank, supported by brick piers (*p*). *e*, Pipes for the supply of atmospheric heat. *f*, Apertures for the admission of air, which passes through the chamber *g*, into the tank, by a series of openings at *h*, and thence into the house by the tubes *m*, escaping through the ventilators *i*. *m*, Bed of soil on which the plants grow.

in this tank, a series of pipes might be so arranged as to supply heat to the atmosphere above the tank, which would be constructed so as to be as near the glass as circumstances would admit: a shallow bed of soil would be placed, resting on a due portion of open rubble for drainage; the upper surface of the tank would be rendered level, so as to admit of water being poured in quantity among the loose drainage, which would ultimately, by the agency of the heat below, be induced to rise among the soil in the form of vapour, and thus duly supply it with moisture. Beneath the tank, an open space would admit

of mushrooms or rhubarb, &c., being cultivated with facility. The admission of air would be provided for by apertures through the front wall, communicating with the upper part of the tank above the level of the water ; from thence small tubes would rise at intervals through the soil into the house, and this might be opened or closed at pleasure ; the outer orifice would be provided with small sliding shutters, to exclude the external air when not required. By this arrangement the cold air would pass over the surface of the heated water, and become not only warmed in its progress, but also supplied with an amount of moisture proportionate to its rarefaction, and the evil resulting from the admission of cold dry air will thus be altogether prevented.

The plants would be trained on a trellis placed about 15 inches from the glass, and their roots would be confined to certain portions of soil, which would from time to time be replenished. This might easily be accomplished by various arrangements ; a few slates placed about each plant would serve as one simple means of effecting it. Transverse divisions would be introduced so as to allow of the removal and renewal of a plant and its soil without disturbing its neighbours ; a complete succession might thus be effected. The structure itself would exteriorly be covered with shutters of light frame-work, covered with painted or tarred canvass. These would be kept about six inches from the glass, and thus a cavity would be formed, the air contained in which would serve to prevent that incessant drain upon the temperature of the house which takes place either when the covering is in contact with the glass, or when altogether absent.

Next in importance and usefulness to a house such as I described, I would recommend a pit heated in a similar manner, as being equally suited to accomplish the end in view, though somewhat less convenient in its application to practice. The principal difference between the house already referred to and such a pit would be the omission of the pathway at the back ; and that the tank would occupy the whole width of the pit, except, perhaps, a cavity of six inches on either side, or else (which would be equally effectual) the improvement already described in this work might be adopted. The plants would be trained on a trellis near the glass, and be grown in shallow beds of soil above the tank.

*Planting.*—I may here take occasion to mention that a small

portion of soil only should be employed at the time of planting ; for if the whole of what is made use of were placed at once in its appointed situation, it might be subject to become soured by the constant action of the atmospheric humidity ; at any rate it would be preferable not to risk such a possibility. The portion employed and from time to time added, may be kept together about the roots by means of two or three common slates placed about it. Instead of raising the plants in pots, and transplanting them to these little hillocks of soil, I would prefer sowing the seeds at once where it was intended they should grow. The tissue of which the roots of cucumbers are composed is of a very succulent and tender nature, and is liable to sustain a serious injury, even by the most careful act of transplantation. This mutilation would have the effect of checking the growth and development of the plants—a result which no care should be withheld which could possibly have any influence to prevent. The development and fructification of plants, all other circumstances of growth being favourable, will be in proportion as the elements of their vitality and extension are uninterruptedly supplied ; and, all other circumstances being equal, the result of injury sustained by the organs of nutrition, or of a diminution of food, will be to retard the ultimate perfection both of development and fructification. To carry this principle into practice, I would propose that these hillocks of soil should be made of the same height as the thickness of the soil was intended to be ; on this I would invert a 60-sized pot, having the bottom neatly taken out, and this should be filled with soil in which to sow the seed. After vegetation, the roots would penetrate and ramify into the soil beneath, whilst the inverted pot would still remain about the neck of the plant, where it would serve to protect it from injury, either in watering, in adding fresh soil, or from any accidental causes. It will be an advantage, whilst the plants are young and there is no risk of injuring the roots, to stir the soil very lightly every day, so as to keep all clean and neat about them, and prevent the growth of fungi, which are during winter ready enough to rise into being ; it will also prevent the surface from becoming caked, and thereby rendered impervious to the action of the source of light and heat.

*Pruning.*—The plants being intended to occupy a surface of trellis-work near the roof, it will be requisite to encourage their

leading shoots to a length sufficient to reach it ; when this point is gained they should be "stopped," and thus induced to produce lateral branches ; these should be disposed at regular distances on the trellis in a direction towards the top of the house. When they have grown about half-way, they each should also be "stopped," and this will produce several new ramifications of the stem. The uppermost one, if vigorous and healthy, should be trained upwards towards the top of the house, and the others should receive a lateral direction ; if these do not show fruit at the second leaf from the main branch they must be stopped again, and this operation should be continually repeated at every leaf until fruit is produced ; the upper part of the house should have the same kind of treatment. When fruit blossoms are perceived, the branches on which they occur should be permitted to extend until after the flower has expanded, with a view of leading up a suitable, but not accumulative, supply of food at that delicate period ; after this the branch should be stopped at the next leaf beyond the fruit ; this will throw in a more abundant supply to that particular part, which is now performing functions peculiarly its own, and which require to be properly supported and encouraged : the leaf beyond will serve as a reservoir to receive the surplus supply, and as a laboratory to purify and assimilate that which reaches it, and return its appointed portion towards sustaining the constitutional vigour of the plant.

This system of pruning must be continued whilst the branches continue in a bearing state, but when any symptoms of decay or of expended powers are perceived, they may be pruned quite away, and young and vigorous branches encouraged in their stead. All this pruning, except that of removing the main shoots, should be done at a sufficiently early period of growth ; to be effected with the thumb nail ; for, like all other plants, cucumbers are best treated when whatever pruning they require is performed when the least amount of trouble and labour is required to perform it. It is better to remove a portion of any plant at an early period of its growth, and thus to economise its vital energies, rather than to suffer them to be expended, and the supply to become exhausted through a superfluous development, and then to deprive it of the very organs by the action of which the expenditure would be again recompensed to the vital energies.

*Season.*—But little can be said as to the exact time at which

the various operations of sowing, pruning, &c., should be attended to, as that will be entirely dependent on the ultimate object in view. If a continued succession of fruit is required, they must go on simultaneously and consecutively; whilst if the object in view is more limited, the means employed to effect it may be abridged. To cut fruit about Christmas, it is advisable to secure an abundance of strength in the plants, which can only be done by securing maturity of growth during the early autumn months, and therefore the middle or end of August may be regarded as a desirable time to sow the seeds with that object in view. It should ever be borne in mind, that it is far more certain and easy to provide a fruit on Christmas day, when the plants are in a fruiting state a month earlier, than when it is attempted only to have the first fruit ready about that time. There are other advantages in commencing soon enough; one of which is, that if the fruit is ready a few days earlier than it is required for use, it can be kept; but, on the other hand, if it is a few days too late, the evil cannot be remedied.

## ON THE CULTURE AND FORCING OF VIOLETS.

By Mr. D. WATT.

OF these simple but beautiful flowers there are several varieties in cultivation, but none of them more beautiful than the Neapolitan, which is a double pale blue, and forms a pretty contrast with the double purple variety.

The cultivation of it is very simple, and there is no difficulty in its propagation, as the side shoots will strike root freely if taken off in March and placed either in pots, in a cold frame, or on a border by a south wall, in a compost of leaf-mould, loam, and sand, well mixed together. I would prefer the latter situation, because in this way they are attended with less trouble and with equal success. The cuttings ought to be planted four inches apart in the rows, and six inches between the rows, to give an opportunity of lifting them with balls of earth at their roots. As far as my experience goes in the cultivation of these truly sweet-scented plants, I think a south aspect ought at all times to be chosen, where it can conveniently be afforded.

The compost that I have found to be the most suitable for growing these plants, is a mixture of very sandy leaf-mould,

thoroughly decayed cow-dung, and loam, in equal proportions, well mixed together. I would by no means recommend planting them in nooks, and corners, and shaded places, although I have seen it oftentimes recommended by practical men ; and although I am well aware that violets will grow and flower in almost any situation and in any soil, yet the flowers have neither colour, scent, nor size, when compared with those grown in open aspects. As soon as the cuttings are properly rooted, which will be about the end of April or the beginning of May, they ought to be carefully lifted, and planted in beds about nine inches apart in the rows, and twelve inches between the rows ; after planting, a good watering is requisite, to settle the mould about the roots of the plants, and a temporary shading for a few days might be necessary, removing it gradually as the plants get established. Particular attention must be paid to the watering of these plants, for if they are allowed to suffer for want of moisture, it will, in all probability, throw their flowering season considerably later. I have invariably found them to be very much benefited by an occasional watering with well-decayed sheep's-manure water, until they commence flowering, when it must be withdrawn, or otherwise it will destroy the perfume of the flowers. Under this treatment I have had abundance of flowers by the second week in September, which continued until the first succession of forced plants came into flower.

*Forcing.* — In forcing the violet, it is the opinion of some gardeners, that bottom-heat is required during the time this operation is in progress : or otherwise removing them in succession to a forcing-house, where they are subjected to a heat of between  $50^{\circ}$  and  $60^{\circ}$ , during the night, and to about  $20^{\circ}$  higher during the day : they will flower under this treatment, but what are their flowers? — they have neither colour, nor size, nor do the plants produce half the quantity that they would do, if they were in a much lower temperature. In establishments where violets are much admired, and often required, which will generally be found to be the case where there are young ladies, I would recommend a frame to be placed in a situation where it would have the greatest degree of benefit from the sun during the short dull days of winter : the same compost may be used that I have recommended for their general cultivation ; to ensure a free drainage, a quantity of rough material may be placed in the bottom of the frame ; then the frame can be filled

to within six inches of the top with the compost; after which the plants can be put in, well watered, and shaded for a few days until they get established.

The season of planting must be regulated according to that in which they are wanted to flower: if planted in June, they can be had to flower about a fortnight before Christmas. They will be forwarded, or retarded, according to the state of the season. If wanted to be in flower by the time I have stated, the forcing operation ought to be commenced about the middle of September, allowing them the protection of the lights during the night only for the first fortnight; after which they must be allowed to remain on during the day, with the admission of plenty of air from sunrise to sunset. They may remain under this treatment for another fortnight, or three weeks, when less air will be required, for by this time the short days and long cold nights will have set in. They must be covered, so as not to allow the frost to get at the plants, for which purpose dry hay or leaves will suit equally as well as mats. After the first set of plants come into flower, the protection of the lights may be withdrawn from them, in order to bring on a succession, if they be not already progressing: a temporary frame may be placed over those from which the lights have been taken, to prevent the covering from falling on the plants. By the above method of flowering the violets during the winter, I have been able to gather a weekly supply of six ordinary-sized bunches, besides occasional extra demands. I would recommend the Neapolitan, as being the most suitable variety for this method of forcing.

#### A FEW REMARKS ON THE CULTIVATION OF THE SHALLOT.

By Mr. G. WYNES.

THE *Allium Ascalonicum*, or Shallot, is a bulbous-rooted perennial, a native of Palestine, and introduced in 1542. It is considered one of the mildest of the cultivated alliaceous tribe, and is used for a great variety of culinary purposes, both in stews, soups, and made dishes; sometimes it is used in a raw state, cut small, and served as sauce to steaks and chops.

The Shallot is seldom known to flower in this country, and

consequently it does not produce seeds; it is therefore propagated by dividing the clustered offsets, which are either planted in autumn or spring, as may best suit the opinion of the cultivator.

There are great differences of opinion existing with respect to the time of planting, and the selection of the bulbs for that purpose. It may be well therefore to remark, that some cultivators recommend planting the very smallest bulbs, about the middle of October: the reason assigned for this practice is, that the smallest bulbs are less subject to get mouldy, and that it prevents the attacks of the maggot; this may be true to a certain extent; but from my own experience I would always prefer to plant the very finest and largest bulbs I could select, and to plant them in March.

I believe it is a generally received opinion that all bulbous-rooted plants generate in one season the sap which is expended in the formation of the leaves and roots in the succeeding one: this reserved sap is deposited in, and composes the bulb; and it is reasonable therefore to suppose, that the finer and larger the bulb, the better will it be qualified to supply nourishment for the future plant. For this reason, I would always prefer the finest bulbs I could select for planting.

The greatest objection I have to autumn planting, especially in a season like the present, is, that the ground being warm, and well supplied with moisture, will excite vegetation immediately the bulbs are put in; and in cases where they were planted about the middle of last month, the leaves will soon be pushing through the ground, and the first frost that comes will damage them more or less. It matters not howsoever hardy a plant may be; if it is growing, and full of sap, it cannot resist the frost uninjured, for as soon as the sap is congealed, it expands and ruptures the vessels, which stops the circulation, and the stem or leaf is injured or destroyed. Although if, when the first leaves were destroyed, the bulb might not perish, yet it will be so enfeebled by the loss of what it has expended in the formation of these leaves, that it will remain in a debilitated state throughout the season; and we are well aware that plants in a sickly state are more subject to the attacks of insects and disease than those which are in health and vigour. This, then, may be one cause for the attacks of the maggot; and I believe too deep planting to be another cause of disappointment to the cultivator of the shallot.

I have often heard it recommended not to manure ground for shallots, as it would be sure to generate the maggot. I am decidedly of a different opinion, for all the cultivated alliaceous plants that I am acquainted with are what may be termed gross feeders, and delight and thrive most luxuriantly in rich soil; and I still maintain, that if a plant can be kept in a robust healthy state, it will be less subject to the attacks of insects or disease than it otherwise would be.

To conclude these rambling remarks, I will give a brief outline of the practice I have pursued. In the first place, I select a piece of ground intended for the future crop of shallots, and give it a "hearty dunging" with well-rotted manure from an old hotbed; this is done in autumn, and the ground is laid up in ridges to get mellowed by the winter's frost; about the first week in March, I level down the ridges, and break the ground well with the spade; after which, I mark out the intended rows, fifteen inches apart, and with a hoe draw the fine pulverised soil up in ridges about two and a half inches high, and plant the bulbs, about eight inches apart, on the top of the ridges, inserting the bulb to about half its depth. As soon as the plants are well established, and have got firm hold of the ground, I take the garden engine, and wash away all the earth from the bulbs, and leave them quite exposed, with only the tips of the roots in the ground. It is astonishing to see what progress the plants will make under this treatment. I have had several of my neighbours ask what sort of onions they were, and when I told them they were shallots, I was scarcely credited; if it were so, they said, it must be some new variety, for they certainly had more the appearance of onions than of shallots, both in the shape and size of the bulbs and of the leaves. I can safely say, that I never saw the least signs of maggot or mouldiness about them. The best way to keep them is to take the bulbs up in August, and lay them in the sun to dry; when perfectly ripe, tie them in handfuls by the stems, and hang them up in a dry cool shed.

Any one who will take the trouble to try the above method of growing shallots may be assured of an abundant, clean, and healthy crop; and I am confident, from my own experience, that no one will have cause to regret the extra labour.

*Buckingham Palace Garden,*  
Nov. 7. 1844.

## ON STANHOPEA.

WITH AN ENGRAVING OF *S. TIGRINA*.

THIS Tiger-marked Stanhopea is truly a most extraordinary member of a most astonishing class of plants. Orchidaceous plants generally, when viewed for the first time, present to the beholder a complete vegetable enigma, which it is impossible to solve by attempting a comparison with any other form in the same natural kingdom: the result of the most strange freaks of the wildest fancy would fall far short of these prodigies of nature, these vegetating vagaries, and yet how singularly beautiful is the arrangement of their floral parts! how admirably suited the organic conformation of the plant itself to the station assigned for its natural occupation, ever varying throughout the many genera, as it were to meet the exigencies of habitat. Orchideæ seem to the observant admirer to be the last, greatest, and most gorgeous embellishment applied by the generous bounty of an Almighty hand to an already perfect work.

It may perhaps be interesting, as well as useful, even in a practical sense, to point out what appears to be the peculiar adaptation of these plants to the situations in which they are found, as well as the seeming requirement of them in such situations. Chemists tell us that, for the support of animal life, a large proportion of oxygen, derived from the surrounding atmosphere, is consumed, and without the due supply of which none could exist, while for vegetable life, its opposite, or carbon, is required; these are the chief constituents of the two great divisions of creation, which, if reversed in the application, would prove alike fatal to both; each of them are present in common air, but, by the intervention of plants, the injurious increase of carbon is prevented, by the consumption of it for their own purposes, and in its assimilation they separate and emit the oxygen, so necessary to animal constitution. Exotic Orchidaceæ are found only where moisture is prevalent,—usually in the form of floating aqueous matter; or in other words, a warm, humid atmosphere is necessary to their existence: now it is in situations such as these that carbon abounds, consequent on the presence of so much water, or rather on the very rapid decomposition which follows the extinction of life, and it is from this cause that the tropics



STANHOPEA TIGRI



are so inimical to constitutions used to a purer atmosphere : how beneficent the arrangement, then, that places here the most luxuriant vegetation of the world, in order to reduce these evil effects, in the working out of which the plants under consideration occupy no minor position ! — they are purifiers of no mean power, evidently intended for stations where no other form of plant could exist. Seated on the decaying stump of a tree, or swinging on the remains of a dead branch, whence otherwise would issue a stream of impure gas, to the detriment of the animal portion of the occupants of the country, or it may be, spreading themselves over the face of a craggy promontory whose crevices are filled with putrefying debris, they perform their allotted task in silence, and with positive certainty.

Now then that we know something of their intended end, we may begin to admire the adaptation which suits them to such purposes. In the countries mentioned it is well known the weather is seasonal ; at one period subject to the torrid influence of a vertical sun, which dries the atmosphere even to aridity, and then again deluged with almost incessant torrents of rain : in the latter season these plants acquire a surprising vigour ; they form new parts, and, as it were, provide a store of sustenance against the exhaustion consequent on the recurrence of the former period ; and for this purpose, what form seems so appropriate as the pseudo-bulb or bulbous stems common to them ? which, if examined, will be found to consist of an innumerable ramification of minute veins or ducts containing liquid, alimentary matter, covered with a thick, leathery epidermis, so as effectually to prevent radiation or the withdrawal of moisture, but by the most gradual and almost imperceptible manner. And then, again, the majority possess stout fleshy leaves, having nearly an equal absorbent and retentive power ; in short, their roots seem to be the only ephemeral organ they have, for many of them we believe to be virtually deciduous, not lasting in actual vitality more than one season, though, from the wiry nature of the central portion, they are of assistance to retain the plant in its position for a much longer time. This applies to nearly all that have pseudo-bulbs, where, indeed, their continuance is of far less moment, as the plant possesses a reservoir of nutriment within itself sufficient to relieve it of the necessity of any extraneous assistance.

Thus, then, do these plants, which are the wonder and admir-

ation of all who behold them, either for their minute curiosity or gorgeous splendour, perform most important functions in the grand scheme of creation, displaying another link of the harmony which exists in all created matter.

The genus *Stanhopea* was so named by Sir William Jackson Hooker, in compliment to Earl Stanhope, president of the Medico-botanical Society, and a great patron of horticulture. It comprises upwards of seventy species and varieties, which have a widely-extended geographical range over the greater portion of the South American Continent and adjacent islands.

The first importation occurred in 1824, when the species *grandiflora* was brought from Trinidad, to excite the surprise of British cultivators with its large, pure white, ivory-like flowers. The admiration consequent on the production of the flowers of this species was gradually increased by the successive introduction of *S. insignis*, *S. oculata*, and *S. eburnea*, together with some varieties of the two first, until it reached a climax by the amazing richness and variety of colouring displayed on the extraordinary forms presented by the blossoms of *S. tigrina*, *S. Wardii*, *S. Devoniana*, *quadricornis*, *saccata*, and *Harrisoniae*, which were all introduced within a few months of each other in the year 1836. Lately, however, varieties have increased almost *ad infinitum*, especially of the species *oculata* and *insignis*; of *tigrina* also there are several, varying both in size and colour. That represented in our accompanying plate possesses the most intensely-coloured markings of them all, which, combined with its large size and bold habit, concurs to render it the most highly esteemed of Stanhopeas. The flowers of this plant are produced in pairs on a short stem, which proceeds in a downward direction from the base of the pseudo-bulb, penetrating through the mass of earth in which the plant is grown, until it attains the exterior of the basket, at a short distance from which the flowers are unfolded. The specimen from which our drawing was taken formed part of the rich collection of Messrs. Rollison, of Tooting, Surrey, and at the time had fifteen pairs of flowers fully developed, presenting in the whole a most gorgeous object.

We have before (at p. 173. Vol. IV.) given an outline of the cultivation of this genus; but it may be necessary, for the benefit of new subscribers, to repeat the substance of those remarks. From what we have just mentioned respecting the manner in which these plants grow, and produce their flowers, it will be

evident that they require to be placed in soil of an open texture, confined about them only at intervals, or their flower-stem will not be able to protrude, and consequently perish ; this has induced the use of baskets, and for these and all other pendent flowering species they offer decided advantages over any other mode. The neatest in appearance, and most durable material we have yet seen for the construction of these baskets, is the smaller kind of bamboo canes, such as are usually employed for umbrella handles ; they may be bought at a trifling price, while in the rough, and can be cut into lengths and used as they are required. Baskets thus made are very light, rather ornamental than otherwise, and will last several years ; a matter of no mean consideration in the culture of Stanhopeas, which do not thrive if frequently removed. The soil in which they delight is a mixture of turfy heath-mould, containing a large proportion of decayed vegetable matter, and sphagnum ; an equal quantity of each will afford a suitable medium for the full supply of nutriment to the roots of the plants, observing to cut the moss rather small previously to using it. Very much of the success that should be attendant on the management of these plants depends on the application of water. It is necessary, to insure a vigorous growth, that a plentiful allowance be given at the proper season, and continued until near the perfection of the new parts ; so also it is necessary that a very considerable reduction be made immediately after this period, in order to thoroughly ripen the additional pseudo-bulbs, and to induce them to flower ; and in a corresponding degree, and at the same time, there should be an increase and diminution of temperature, the rise and fall of the latter agreeing with the presence and absence of moisture. A liberal supply of moisture consists, in our estimation, of a moderate quantity applied to the roots about three or four times in a week, just enough to moisten the whole mass of mould throughout, and the application of steam for an hour every night and morning ; the most proper time to begin the system is when the plants first indicate an inclination to grow, by the swelling of the buds at the base of the pseudo-bulbs. It must be understood, that though we advise a decided difference in the supply at the growing season and afterwards, yet we do not recommend an entire cessation : sufficient must be given to prevent the pseudo-bulbs shrivelling, or the effect will be a puny attempt at flowering. The maximum tempe-

rature for the growing season may be stated at  $75^{\circ}$  or  $80^{\circ}$ , on reaching which air must be admitted, and the minimum should be  $60^{\circ}$ ; for the resting period  $60^{\circ}$  will be quite enough for the maximum, allowing it to fall at night, and in dull weather to about  $50^{\circ}$ . — Ed.

### TRELLIS FOR CLIMBING PLANTS.

MANY very opposite opinions are just now being promulgated as to the most appropriate form to be given to climbing plants, or rather to the wire frames on which they are trained, and there are advocates for nearly every imaginable shape. The proper disposal of the tender and flexible branches of these plants is, beyond question, a matter embracing a considerable amount of taste, and affords the gardener an excellent opportunity for the display of ingenuity and attention. For this reason I may be pardoned troubling you with a somewhat worn subject, though a notice of it seems necessary in defence of those who presume to think in opposition to the *savans* who are attempting to lead all taste.

Some of these gentlemen state in the most positive tone, that in future nothing but globular or cylindrical trellis can be received as possessing the least pretensions to propriety. Many extraordinary reasons are assigned for this decision, and some hard names employed to attach ridicule to the old-fashioned flat frames usually seen. Now, as I happen to use a great many of all descriptions, and from conviction am favourable to the flat trellis, with your permission I will undertake the defence of its continued use. And first, to meet the dissentients in their most important objection, viz. its tastefulness, here I must observe, that in my opinion true taste consists in the appropriate application of ornament to whatever in itself bears the impress of some definite object of usefulness, and without which all ornament is mere fantastic arrangement. What, then, is the object in supplying trellis to climbing plants? Is it not that the whole plant may be seen and admired? This cannot be disputed; and then what form can be chosen but the flat one, which will do this to the full? Circular trainers of any kind exhibit only half the plant, and most troublesome it is to pre-

serve the proper vigour on the side secluded from the light. It is true a poetical illusion has been thrown over the cylindrical shapes, by imagining their resemblance to a pillar; but I could say something about how nearly they approach the form of a chimney-pot. However, their best friends do not recommend them on the ground that the plant will succeed better upon their favourite shape than any other: many of them, indeed, have divided the question, by using only half a cylinder, because they find it next to impossible to preserve the same appearance on all sides of a circle, and it certainly is better to have a whole plant even on half a trellis, than half a plant on a whole cylinder. And here it is that the superiority of the flat frame stands prominently forward; the whole of the plant is seen at a single glance, every leaf and flower being placed in the very best position to please, and, moreover, that position is the one most natural and conducive to the general health of the plant. Much has been said about the form best suited for grouping with other plants of a contrary character. Now I think that climbers never do, or will, "group well" with shrubs or plants of any description of other than their own character; they should be grown or exhibited by themselves, for all training is artificial, and every kind of trellis displays a formality too conspicuous to escape the observant eye of taste. This view of the matter reduces the question to the mere consideration of what form will best set off the plant when in perfection, and I think what I have said will make that of easy determination, unless indeed the strictly natural mode of supporting them can be received as admissible among cultivated objects; this would be to place the branch of a tree within reach of the plant, and allow it to take its own direction,—a method too negligent in appearance to meet the commendation of those who value neatness, though perhaps preferable to any kind of training where it is absolutely required to mix them with other vegetable forms. On the score of convenience, I am also disposed to give the preference to the flat trellis, as they occupy less space, will stand where no other plant would that is growing in a pot of the same size, even with advantage against the back wall of the house, or even two or three deep, without injury, observing only to place the strongest in the position that is furthest from the light, and the stems or branches may be disposed, examined, and cleaned with much greater ease and precision, and the constant trouble in turning

necessary to the round ones is entirely obviated. These considerations have brought me to the conclusion, that of all artificial forms for climbing plants the flat trellis is the best.

HORTULANUS.

[In our opinion a slightly convex frame possesses all the advantages of either of the forms mentioned by our correspondent; in fact, displaying the plant to greater advantage than any other. We perfectly agree with him in his remarks on "grouping," climbers are a distinct class of plants, and under all circumstances, excepting only when employed to ornament a fixed structure, should be kept as distinctly separate. ED.]

#### RECOVERY OF PLANTS FROM FROST.

IT is not so generally known among amateur cultivators as perhaps is to be wished, that plants which by some inadvertent accident have been subject to the influence of frost may be recovered by simple means without experiencing any material injury, and it may happen, that, by mentioning it at this season, the lives of some especial favourites will be preserved.

We are fully cognisant of the unpleasant change experienced when it becomes necessary to turn out of a warm bed into the open air at about four or five o'clock on a frosty morning in winter, to attend to the comfort of these vegetable pets, a duty which, however urgent, nothing but professional habit or a most enthusiastic love of plants can ever render endurable; knowing this, we are aware of the great probability of personal comfort receiving first attention, and the possible consequences of it.

Should it happen, either through this cause or any other, that greenhouse plants, or those preserved in frames, are exposed to the action of frost for a short time, they may be recovered by excluding light as much as possible, and allowing them to thaw gradually. The readiest mode is to cover the house with mats, and apply a very gentle fire. The temperature should be raised about five degrees above the freezing point, and maintained at it, but not higher, for three or four hours before the mats are removed; this will certainly restore them, unless,

indeed, the frost has already ruptured their tissue ; the effects of five or six degrees may thus be expelled ; though a knowledge of this must not serve as an excuse for inattention, nor must the cultivator imagine, that because there is a remedy for slight cases that the plants may be left to themselves through a cold night, for it may likely enough happen that they get an over-dose, from which no art can relieve them.

Another method is sometimes employed, that of dashing cold water through a syringe over the parts affected : this, however, is not an advisable practice, for though it remove the frost, the plants frequently suffer from the effects of the moisture ; it may, however, be adopted where shading in not possible. It must be understood that it is absolutely necessary to the success of either that the application be made on the earliest discovery of the accident, for it would be quite useless to attempt the recovery of the plants an hour after the sun's rays have reached them. — ED.

## LIST OF ORCHIDÆ.

(Continued from p. 36.)

284. *Oncidium lacerum*. This species has much the habit of *O. longifolium*, but the flowers are more dense, as in *O. ascendens*. It also requires the same treatment and temperature. — *Native of Demerara*.

285. *Oncidium papilio*. (Butterfly-like.) Plant pseudo-bulbous ; bulbs 3 inches long, and the same in breadth, rather flat, angles sharp ; leaves single, lanceolate ovate, colour dark purplish green, spotted with pale green ; flower-spike 3 feet long, and slender, lasting for years ; flowers solitary, sepals and petals spotted and barred with orange ; the former are like the horns or antennæ of the insect, the latter are like wings ; the column bears a striking resemblance to the head ; labellum yellow, spotted and barred with purple. This species seems to differ in a great measure from the other members of the genus it belongs to, and it remains a doubt whether it may not more appropriately form part of the genus *Odontoglossum*. It requires pot cultivation, with a free drainage and a compost of turf peat and sphagnum, with some small potsherds mixed together, and to be sparingly watered at any time. Temperature from 65° to 70°. — *Native of Trinidad*.

286. *Oncidium ampliatum*, var. *major*. Plant pseudo-bulbous ; bulbs 2 inches long, ovate ; leaves sometimes in pairs, but generally single, 8 inches long and 3 inches broad ; flower-spike 2 feet long, branched ; the sepals and petals of the flowers are large and showy, yellow spotted with red ; labellum yellow without any spots. This species may be either grown on a billet of wood covered with sphagnum, or in a pot with plenty of drainage and a mixture of turf peat, sphagnum, and small potsherds, with a liberal supply of water while growing, and a mean temperature of 65°. — *Native of Trinidad*.

287. *Oncidium lemonianum*. A very singular looking plant, destitute of bulbs; in habit much the same as *O. tricolor*, but the leaves are much narrower, and the flower-spike slender, bearing but a few flowers, which are yellow; treatment and temperature the same as for *O. triquetrum*. — *Native of Brazil*.

288. *Oncidium barbatum*. Plant pseudo-bulbous; bulbs 1 inch long, rather flat, of a pale yellow; leaves in pairs, 4 inches long; the sepals and petals yellow, spotted with brown; labellum yellow. This species requires pot cultivation, with a free drainage and a compost of turf peat, sphagnum, and small potsherds, with a slight elevation above the level of the pot; water will be but sparingly required at any time; temperature, 65° to 70°. — *Native of South America*.

289. *Oncidium fimbriatum*. Plant pseudo-bulbous; bulbs very much like the last; flowers borne on a short spike; sepals and petals yellow, spotted with brown; labellum yellow, fringed at the margin. For treatment and temperature it may be referred to *O. barbatum*. — *Native of Brazil*.

290. *Oncidium bifolium*. Plant pseudo-bulbous; bulbs 1 inch long, green, slightly barred with brown; leaves in pairs, 6 inches long and an inch broad; the flowers are produced on a half-pendent spike; sepals and petals half an inch long, greenish yellow, spotted with brown; labellum very bright yellow, 2-lobed, and better than 1 inch broad. This species is well worth cultivation, and requires growing in a basket suspended from the roof, in a compost of small pieces of turf peat, potsherds, and sphagnum, liberally supplied with water during the growing season, and a temperature of 65° to 70°. — *Native of Monte Video*.

291. *Oncidium bifolium, var. pallidum*. In this variety of the last species the habit is the same, but the flowers are much paler, and not so fine. It requires the same treatment and temperature. — *Native of Monte Video*.

292. *Oncidium reflexum*. Plant pseudo-bulbous; bulbs 6 inches long; leaves in pairs, 18 inches in length; the flower-spike is frequently 2 feet long; flowers yellow; the sepals and petals being bent backwards give to the blooms a distorted appearance. This species requires the same treatment and temperature as *O. barbatum*. — *Native of Mexico*.

293. *Oncidium nudum*. This species is destitute of bulbs, and has the habit of *O. Cebolleti*; its flowers differ a little in form, and the sepals and petals are much more spotted with brown; the labellum is bright yellow. It requires the same treatment and temperature as the one alluded to. — *Native of Caraccus*.

294. *Oncidium Philpsianum*. Plant pseudo-bulbous; bulbs 3 inches long; leaves in pairs, 18 inches long; the flowers are large and splendid, borne on a long spike much branched; the sepals and petals pale green, spotted with purple; labellum yellow. In general appearance this plant very nearly approaches *O. altissimum*, of which I think it only a variety; treatment the same as for that species; temperature 65° to 70°. — *Native of Brazil*.

J. HENSHALL.

(*To be continued.*)

## BRITISH ORCHIDEÆ.

I HAVE been much pleased by the remarks of one of your contributors, contained in your last excellent Number, on this

interesting subject. I have for years been trying to induce my horticultural friends to make collections of our home orchises, but I do not recollect that I ever induced more than one party to pay that attention to them they so richly deserve. I have ever found them ready to grow an exotic, let it be ever so insignificant; but our home plants they seem to disregard altogether. I beg to assure your readers they may grow British specimens with very little trouble. I have grown them more or less for many years, and have always found them to more than repay any trouble attending them. Your correspondent is quite correct in supposing they may be much improved by judicious culture, and I can fully enter into his feelings, that in this day, when floriculture is so rapidly advancing, it is strange these lovely plants are so little noticed.

In the neighbourhood of Matlock, Bath, Derbyshire, I have found the following, which alone would form an interesting group:—

<i>Orchis bifolia</i>	<i>Gymnadenia conopsea</i>
<i>pyramidalis</i>	<i>hircina</i> <i>Satyrium</i>
<i>morio</i>	<i>hircinum</i>
<i>mascula</i>	<i>Ophrys muscifera</i>
<i>ustulata</i>	<i>apifera</i>
<i>militaris</i>	<i>Neottia nidus avis.</i>
<i>maculata</i>	

There are, I believe, about four or five others found in the same locality.

*Manchester.*

**G. T. DALE.**

[Will any of our friends oblige us with a detailed mode of growing these native gems? — ED.]

#### A NEW TRAP FOR INSECTS.

WE have lately received from Mr. Devonport, of Newport, Staffordshire, an ingeniously contrived trap for earwigs, woodlice, and such nocturnal predators. It is made of earthenware, in form of a double funnel, the inner one being smaller and shorter than the outer, leaving a vacuity for the reception of the insects; the under side of the first, where it is intended the tops of the flower-

stick should come, is made rough, to facilitate the entrance of the insects, while every other part of the interior, as well as the outside, is glazed. This prevents their return, after having once passed over the top of the inner cylinder; they are then taken by removing the stopper of the exterior mouth, and shaking them out. The advantage is apparent in the saving of trouble effected; for with ordinary traps it is necessary to examine them every morning, or on the approach of night the destruction recommences, the insects returning again to feed on the plants beneath; but with this of Mr. Devonport it is not absolutely required to attend to them more than once or twice a week, as the glazed sides of the two funnels, which form the vacuity, utterly preclude the possibility of escape. The size of this trap is about that of a small (60) flower-pot; the form is artistical; and if coloured green or some inconspicuous colour, according to the situations they are required for, instead of white, as in the specimen sent, there is nothing about them to offend the discriminating eye of taste, and we are sure the Dahlia grower will receive them as a boon.

## LIST OF NEW PLANTS.

### CACTACEÆ. — *Polyandria Monogynia*.

*Disocactus biformis*. A singular little cactaceous plant, with smooth, round, woody stems, and fleshy oblong-lanceolate leaves from 2 to 3 inches long; the flowers are solitary, drooping, about 2 inches in length, of a deep pink colour, usually produced at the extremity of the two-years-old leaves. It is remarkable for the regularity in number with which the sepals and petals are produced; these are constantly four of each—while with Indian figs in general the arrangement of these parts is extremely uncertain and various. This feature has suggested the idea of founding a new genus, of which the present subject is the type. It was introduced by G. U. Skinner, Esq., from Honduras, in 1839. In cultivation the plant requires a warm greenhouse and the usual treatment of such plants; it is an abundant bloomer, and is equally interesting in the autumn, when covered with its crimson fruit. — *Bot. Reg.* 9—45.

### BERBERACEÆ. — *Hexandria Monogynia*.

*Berberis trifoliata*. This very rare and beautiful species was found in Mexico, by Mr. Hartweg, near the Hacienda del Espiritu Santo, on the road from Zacatecas to San Luis de Potosi, an immense plain, occupied chiefly by Opuntias, stunted plants of *Prosopis dulcis*, and *Yuccas*. It covered large tracts of country; the people call it Acrito. Its sessile, ternate, holly-like leaflets, beautifully marbled with pale blue and dull green, are entirely different from any thing among the pinnated Berberries hitherto

discovered, and, it may be added, are very much more handsome; the racemes, if such they can be called, are axillary, bearing three or four bright yellow flowers. It forms a dwarf-spreading evergreen shrub, and seems to be about as hardy as *Berberis fascicularis*. — *Bot. Reg.* 10—45.

**SOLANACEÆ.—*Pentandria Monogynia*.**

*Solanum macranthum*. A native of Brazil, and has long been cultivated in the old stove of the Royal Botanic Gardens of Kew, where, planted in the border, it has attained to the height of the roof. In such a situation it really makes a very handsome appearance, with its ample foliage, and its large, pale, lilac-coloured flowers, which, drooping as they do, are seen to great advantage from below. To those cultivators who have not space to allow its growing thus freely, cuttings may be recommended, which strike freely, and flower almost as soon as struck.—*Bot. Mag.* 4138.

**PASSIFLORIACEÆ.—*Monadelphia Pentandria*.**

*Disemma aurantia*. This plant resembles in general appearance some of the smaller-growing Passion-flowers; it is a native of New Caledonia, and there are three other species, all of Australian origin. It is a greenhouse climber, easily cultivated in a pot, with wire trellis; and is remarkable for the flowers being nearly white in the bud, and on first expanding, gradually assuming a yellow or tawny tint, and finally becoming a brick red. The sepals have a singularly broad keel or deep wing at the back.—*Bot. Mag.* 4140.

**THYMELEÆ.—*Octandria Monogynia*.**

*Cryptadenia uniflora*. Among the handsomest of the Linnæan genus *Passerina* were three species, the present, *P. grandiflora*, and *P. ciliata*, which, in habit, as well as in essential character, differed considerably from the others. These Professor Meissner has wisely separated from *Passerina*, and named *Cryptadenia*, from the presence of eight glands concealed within the tube of the floral envelope, and alternating with the eight stamens. All are natives of the Cape. The present species, though sufficiently known in Herbaria, is probably rare in gardens, though well deserving a place on account of the beauty of its copious flowers, and the long time the plant continues to blow. It has, however, been cultivated at Kew since 1759. It flowers there in the early summer months, in an airy part of the greenhouse.—*Bot. Mag.* 4143.

**ORCHIDACEÆ.—*Gynandria Monandria*.**

*Cymbidium ochroleucum*. This plant has a very singular mode of growth, producing its distichous flowers in a leafy spike, quite distinct from the pseudo-bulbs, which themselves originate from the axils of leafy branches. The flowers of the leafy spike open in succession, but I have never seen more than two expanded at once; they are white or cream-colour, fragrant, and rather large; the sepals and petals are nearly uniform, oblong-ovate, the latter rather narrower; all of them concave. The three-lobed lip is yellow, streaked transversely with red; the disk of the lip has a broad crest, formed of orange-coloured imbricated soft spines.—*Bot. Mag.* 4141. —

*Miltonia cuneata*. This is a most beautiful epiphyte, allied to *M. candida*, with flowers nearly four inches in diameter; the sepals and petals a rich brown, tipped with green. The lip is pure white, with a tinge of pink near the base, in form quite different from *M. candida*, for it is scarcely at all curled at the edge, is very much narrowed to the base, and has only one pair of plates instead of two and a half. The wings of the column too are scarcely divided, or at all events not at all notched.—*Bot. Reg.* 8—45.

## TO CORRESPONDENTS.

**T. STANTON.**—Procure the following Camellias, and you will have twelve good ones—*Imbricata*, *Chandleri*, *Bealii*, *Hallei*, *Double Striped*, *Fordii*, *Donkelaarii*, *Monarch*, *Elegans*, *Pompone*, *Press's Eclipse*, and *Reticulata*. Obtain your seed, if possible, from *Donkelaarii*, or any other variety rather than *Waratah*, the latter having been seeded for so long a period, that the chances of getting a distinct new one from it are so much lessened as to be scarcely worth the trial.

**FLORISTA.**—Cut down your Chrysanthemums, and place them out of doors; if they are alive now, there will be plenty of new wood to propagate with next May.

**A SUBURBAN GARDENER.**—We have stated before that the majority, or perhaps the whole, of Gesneraceous plants may be grown to a high state of beauty, with the assistance of a common garden frame and a greenhouse, provided the latter is kept a few degrees warmer than usual after the admission of the plants. Potted now, and placed in a temperature of about  $60^{\circ}$  or  $65^{\circ}$ , they will quickly vegetate, and, with the ordinary attention to watering, &c. will begin to produce their flowers in May, which is the most proper time to remove them to the greenhouse, though it may be done sooner if space in the frame is limited; the advantage of deferring is, that at that time the ordinary occupants can be placed out of doors, and the house managed with reference more particularly to these.

**J. T.** As you are restricted to annuals we would advise you to fill the beds this way—No. 1. *Nemophila insignis*; 2. *White Candy Tuft*; 3. *Sphænogyne speciosa*; 4. *Nolana atriplicifolia*; 5. *Calandrinia speciosa*; 6. *Erysimum Perofskianum*; 7. *Purple German Stocks*; 8. *Nemophila atomaria*; 9. *White Stocks*; 10. *Mixed Larkspurs*; 11. *Calliopsis atrosanguineus*; 12. *Convolvulus minor*, and 13. *Hibiscus Africanus*; these will afford a variety of colours, are suitable for height, and are easily procured.

**WESTON.**—Protect the rising flower-stems of auriculas from frost by all means in your power.

**X.**—*Gompholobium* requires a higher temperature than is proper for heaths; this accounts for your plant failing; place it now in about  $50^{\circ}$ , and you will see it recover daily; the greenhouse will do for it through the summer and autumn. A similar temperature is equally necessary for the majority of *Kennedias* and allied plants.

**A SUB.**—We go to Shirley for peat, and Wanstead for loam; it is excellent.

## CALENDAR FOR MARCH.

WITH this month the labours of the British botanist may be said to commence in reality. Every sunny nook and bank and old wall will begin to teem with flowers, and a great many of our native deciduous trees and shrubs will be in bloom. The

hazel, the alder, the birches, poplars, various willows, and the yews, will afford excellent opportunities for examining the structure of monœcious and diœcious flowers; and the elms ought also to claim the attention of botanical amateurs, in order to help to clear up the confusion in which our native species of that genus are at present involved. The beautiful *Daphne Mezereum*, and also *D. Laureola*, will also be in flower, and should be sought for especially in woods on a chalky soil, and further, the hellebores, the daffodil, butchers' broom or knee-holly, and many other plants, in similar situations. To enumerate all that may be found would stretch this notice to too great a length; but at least from forty to fifty species of flowering plants ought to be observed by any moderately industrious collector during the month.

In the flower-garden great activity will be required to prepare for summer display, as well as to make the most of those heralds of that more gorgeous time, the hardy bulbs and other plants, whose early flowering renders them such universal favourites. The propagation of all bedding-out plants, of which there is not already a sufficient stock, should be proceeded with. Hardy annuals should also be sown, both in pots and in any vacant spaces where they can remain to flower. Of course any departure from high keeping will lessen the enjoyment of the garden, and at no period of the year so much perhaps as at the present time; extreme neatness, and close attention to common routine work, must therefore be strictly adhered to by all who wish to derive the greatest amount of pleasure from a garden.

In the greenhouse many of the plants will require to be shifted into larger pots. This operation should not be performed until the plant evidently requires it, as shown by its renewed growth. As the large shift, if not the one-shift, system is now very generally practised, the amateur should be careful to avoid the use of compost reduced to a fine state by sifting or otherwise. The earth used, whether loam or peat, should be as turfy and fibrous as possible, and only reduced according to the size of the shift, so as to go tolerably easily between the ball of the plant and the side of the new pot, being careful to use plenty of drainage all through the earth, especially with very large specimens. Charcoal forms the best draining material, on account of its lightness, independent of any chemical or

mechanical properties it may possess in connection with the soil.

In the Stove, potting will also be a principal operation, and the same directions apply here as to other potted plants. The orchidaceous plants, too, should be growing strongly, and should on no account be allowed to stand still for want of stimulants, especially as regards heat, light, and water. The temperature in all plant structures should be gradually rising, but not too rapidly, especially at night,—a high temperature at that period being contrary to nature and very inimical to plants under artificial circumstances.

D. M.

**FLORIST'S FLOWERS.**—The dahlia-grower will now be busy: forward cuttings may be struck in gentle heat, and afterwards hardened off by degrees. Pot roots start with greater strength now than if forced earlier: picotees and carnations require to be potted about the middle of the month; before using, the mould should be narrowly examined, that no grubs or wire-worm be allowed to escape; place a good drainage in the pots, and, after the operation is complete, stand the plants on a slightly elevated stage, to prevent the ingress of worms. Keep auriculas moderately moist; they frequently require water immediately after frost, which dries the soil nearly as much as strong sunshine. Polyanthus should be top-dressed with a very rich compost, and, as they advance towards blooming, liquid manure may be occasionally given. Beds of pinks, pansies, ranunculus, &c. should be top-dressed with rotten manure or some similar stimulant. Roses should be pruned, cutting those it is desired to have in bloom later than the ordinary season close back. Geraniums and calceolarias are extremely subject to attacks from green-fly: this must be remedied by fumigation on the earliest discovery. Fuchsias will require a temperature of about  $55^{\circ}$  throughout this month, with attention to potting, ventilation, and the supply of water, regulating the first by the advance of the plant, and the latter by the state of the atmosphere.

P.





KENNEDIA INOPHYLLA — 2 DILIWYNIA FLORIBUNDA

THE  
FLORIST'S JOURNAL.

APRIL, 1845.

OF THE GENERA KENNEDYA AND DILLWYNIA.

WITH AN ILLUSTRATION.

THE relative value of newly imported plants or seeds is frequently a matter of much anxious conjecture to those who happen to have the care of them, and often years of fruitless attention are bestowed upon forms the most ephemeral and worthless; but on the other hand there are plants, which, though subject to the most unfortunate treatment, preserve to themselves, despite every untoward accident, a place of no mean account in nearly all collections, and, when seen under favourable circumstances, present a perfect flood of beauty: of this latter class, are the plants now portrayed, which, though they have no particular claims on the score of novelty, and are frequently seen suffering the effects of unpropitious treatment, yet are capable of being made to form most ornamental objects.

In the management of *Kennedyas*, the most important consideration devolves upon the due supply and maintenance of a genial atmosphere; it is true they are natives of a country whence plants of a far hardier character have been obtained, and this has probably led to an error in their management, for instead of being found in arid or exposed situations, as much of the flora of that country is, the *Kennedy*a almost invariably occurs in spots remarkable for the salubrity of the air and alluvial nature of the soil: in sheltered glades near the course of waters,

they are found in all their native vigour, clinging to the surrounding vegetation with a tenacity which almost defies the traveller's attempts to force a passage, rendering the shrubs and small trees on all sides gay, with dependent festoons of scarlet, crimson, and orange-coloured blossoms.

When we find a plant thus naturally an inhabitant of humid places, exposed to the wasting influences of constant currents of fresh air and uninterrupted light, it is not surprising that exhaustion ensues: its natural powers of absorption are insufficient to equalize the supply with the demand, and become in consequence gradually weaker, instead of accumulating strength, which necessarily results in an abortive attempt of the plant to perpetuate its species, by producing seeds rather than an extension of its own ligneous parts: this weakness naturally affects the entire energies of the plant, so that the few flowers produced are individually smaller, and seldom retain vigour enough to perfect their seeds; thus the plant gradually gives way before the incessant drain inflicted on it, making however unceasing, but ineffectual efforts to preserve its vitality, until at last its entire dissolution terminates the struggle.

How different is its progress when surrounded by a genial and slightly stimulative atmosphere: the rapid increase and extension of its flexile branches is only equalled by the amazing difference exhibited both in number and size of its floral parts. To grow this genus well, small healthy plants should be selected, and removed about the middle of January from the small pots in which they have stood through the winter, into others at least three sizes larger, using an abundant drainage, both at the bottom and throughout the mass of soil, which should consist entirely of rich heath-mould, containing a large proportion of decayed vegetable matter, adding only a quantity of sand, sufficient to preserve its porosity: this soil should be used in as rough a state as possible, allowing all the roots and small lumps to remain in it, and for the internal drainage perhaps nothing affords a better or more permanent medium than charcoal broken up and mixed thoroughly with the soil: at this stage, a temperature varying from  $45^{\circ}$  to  $50^{\circ}$  should be applied to the plants with a supply of moisture regulated in accordance with the state of the external atmosphere, increasing the amount gradually until by the end of March its maximum may occasionally reach  $60^{\circ}$  or even  $65^{\circ}$  on warm days; with this heat a much larger

quantity of moisture will be required, in fact the atmosphere of the house must be kept constantly supplied with vapour, not to the extent certainly requisite for inter-tropical plants, but to an amount easily appreciable: to the practical man we can readily explain the kind of atmosphere and its changes, most congenial to the full development of the several beauties of these plants, by stating that an early viney is exactly the place in which to grow Kennedyas. When the plants require shifting from the pots last mentioned, they should be turned at once into those it is intended to bloom them in; and it should be remembered that the larger these pots (so that the removal is effected early enough) the larger will be the plants, continuing to treat them as directed until they are about to expand their flowers, when a somewhat drier atmosphere will be better for them: this change must be brought about gradually, but certainly so that by the time the plants are in perfection, they may be standing in a cool and perfectly dry air, which will preserve their beauty for a long period.

The management of *Dillwynia* differs considerably from that just described, as they possess a far more robust character, and may be assimilated in treatment to heaths or the majority of Australian plants: they delight in sandy heath-soil interspersed with lumps of charcoal, broken potsherds, small stones, roots, and other matters conducive to the maintenance of an open porous soil, through which water and air may freely percolate. If the above conditions are fully observed, there is perhaps no plant which may be grown to greater advantage under the treatment usually denominated the "large shift system." Placed at once from a 60 into a 16-sized pot, and allowed an abundance of air from the earliest favourable opportunity until the decline of autumn, it is surprising the advance a plant of this nature will make: a luxuriant vigour is imparted quite unknown to those grown in small pots, even though they are shifted with the greatest care through all the intermediate sizes.

A point of the most immediate consequence to the production of handsome, well-filled specimens is the constant removal of the terminal buds of the growing shoots; it should be done as often as the new stems have shot forth two or three joints. This stopping, as it is called by gardeners, throws additional strength into the parts already formed, and induces them to protrude other shoots from the lateral buds situate in

the axil of each leaf; thus the number of stems may be increased to an almost indefinite extent, moderating the flow of sap by directing it to other new channels, and in effect causing easily matured, short-jointed wood, which is certain to be prolific of flowers. Some little attention is also necessary in the training of these plants: if taken in a young growing state, they may easily be made to form neat, compact, and really beautiful objects; and it is only neglect while they are small that causes the unsightly, straggling things too often met with. We have sometimes seen *D. glycinifolia* spread over a trellis, presenting a prim, formal appearance, quite out of character with the naturally graceful habits of the plant, which, by an observance of what we have just advanced respecting "stopping," may be had quite as shrubby as any heath.

It is only necessary further to remark, that owing to the extreme tenuity of the roots of this genus, much care is required to preserve them from injury, through any excess either of drought or moisture. The drainage and preparation of the soil already recommended will effectually prevent any mischief arising from the latter cause; and while standing in the greenhouse it is only necessary to observe them attentively every day, and supply water whenever the mould appears to be dry. It is, however, sometimes necessary to remove plants of this character from the greenhouse during the summer months, in order to allow space for other flowering kinds, that the gaiety of the place may be maintained; and it is under circumstances of this nature that Dillwynias require particular care, on account of the danger likely to accrue from the effects of intense sun-light either on the plant itself or on the pots; the one causing too great an evaporation of the foliage, and the other by drying the soil preventing the due supply of nutriment by the roots. To obviate this some slight description of shading should be provided for the head of the plant, and the roots may be protected by plunging the pot into some non-conducting material, such as moss, old tan, or ashes; or if the situation will not admit of so unsightly a means, let another larger pot encircle the one in which the plant grows, and fill the interstice with damp moss: this will preserve them uninjured, and render the frequent application of water less necessary.

## ON GRAFTING THE CHINESE AZALEA.

IN calling the attention of the readers of *The Florist's Journal* to the subject of these remarks, I am actuated by the hope that it may assist in bringing this handsome tribe of plants more prominently forward, particularly amongst amateurs. I cannot understand why they have been allowed to remain so long in the back ground, for it is notorious that you may go into a great number of gentlemen's places at the present time, and find only a miserable specimen or two of *Indica alba* and *Phænica*, or perhaps none at all, while by the amateur cultivator they seem to have been entirely overlooked. As I before said, I cannot understand the reason of this; it cannot be that they are of difficult cultivation, for that is decidedly not the case; neither can it be their price, for it is rarely that the price of a new one is half so much as that of a new pelargonium, yet I never saw a pelargonium that I could admire half so much as I have well-bloomed plants of *Azalea variegata*, *A. Gledstanesii* and others. I am well aware my taste in this particular will be questioned by some, but I think the effect before noticed may be partially accounted for by the precarious existence of some of the best varieties; the reason of this I shall not now attempt to explain, or I should trespass too far on your valuable pages, but shall proceed at once to suggest a remedy for this admitted evil. That they are so is too well known to myself and others: the remedy consists in grafting or inarching the Chinese varieties on some more durable and luxuriant growing kind, such as *Phænica* or *Indica alba* (I prefer the former as a stock, but in its absence would not reject the latter), or strong growing seedling plants of either kinds, which may not be worth retaining, as distinct varieties may here be made to serve a very useful purpose. The first week in July is the time I select for performing the operation in the following manner:—for grafting choose as many stocks as it is intended to work, having the cuttings ready; with a sharp knife make a slight incision in the stock downwards, being very careful not to cut the piece of bark off;

then cut the scion wedge-shaped, place it in the incision of the stock, letting the bark of the stock and that of the scion meet on one side, or if on both the better ; then with some wet bast bind up rather tightly the dissevered bark enclosing the scion, and the job is done. Two three or more may be placed on one stock, which will then form fine bushy plants in a short time. They should be placed in some warm moist pit or house. The place I select for that purpose is under hand glasses in the tan-pit of a viney. The heads of the stocks should be reduced gradually as that of the grafts advance in size. Large plants may be worked in the manner here pointed out, by studding them all over with one or more kinds. I can scarcely imagine a more beautiful object than a large plant would be with the first three under-mentioned kinds in bloom at one time. The following are a few of the best sorts for grafting :—*Azalea variegata*, *Gledstanesii*, *luteritia*, *Constantia*, *Greenii*, *amabilis*, and *carminata*. I am well aware that the practice here described is known and followed by many gardeners ; but believing it is not so well known as it ought to be, is my reason for troubling you with these remarks.

E. A. HAMP.

*South Lambeth.*

#### ON THE CULTURE OF CINERARIAS.

IN few plants are so much interest combined with easy management to be found as in the varied members of the genus Cineraria, lasting, as they do, in bloom for such a length of time, and producing such a variety of colour. The greenhouse, or even the windows of the amateur's sitting-room, may be made attractive through a great part of the winter and all the spring months by the brilliancy of these interesting objects. They are increased either by means of seed or cuttings. If the former mode is pursued, the seed should be sown in small pans as soon as it is collected ; the soil most appropriate for the germination of the seed is a mixture of loam and leaf mould in equal parts, adding a good portion of silver sand. The pans should be placed

on a gentle bottom heat, giving them a moderate watering, and as soon as the plants begin to make their appearance they may receive a good portion of air during the day. When they have attained sufficient size to handle without injury, they should be potted, putting each plant separately into a 60-sized pot, and placed in a cold frame or pit. About the beginning of October I shift them into No. 32-sized pots ; in these they remain until March, when they are placed in the pots in which they are intended to bloom, giving them an occasional watering with liquid manure. The compost used for this potting is a mixture of loam and dung in equal parts, adding a sixth of the whole of leaf mould, this should be used in a rough state, with thorough drainage in the pots. They are then removed to the greenhouse, standing them as near to the glass as possible. All flower-buds that make their appearance before February are pinched off, by which treatment the plants become bushy. If the leaves begin to curl examine them very minutely, and if any green flies are detected tobacco smoke is applied immediately, as this pest is a great detriment to the production of well-grown and healthy specimens.

In the cultivation of the Cineraria for the second season, when they may be said to attain perfection, the first step to insure fine healthy specimens is to cut off all blooming stems that may by any means make their appearance after the proper season for blooming ; then give them a top dressing of light rich compost, and when this is done the plant should be removed from the greenhouse to a shaded situation in the open air, near to a north wall, where they will require to be liberally supplied with clear water — in fact, never allowing them to become thoroughly dry. Here they may remain until the middle of autumn, when the previous winter treatment should be repeated.

In summer, when the plants have thrown out plenty of new shoots, cuttings may be taken from those kinds most desirable to increase. In preparing the cuttings, all that is necessary is to remove the lowermost pair of healthy leaves, then cutting it close to the joint with a sharp knife. The soil best adapted for the growth of the cuttings is a mixture of loam and leaf mould in equal parts, adding a good portion of sharp sand ; insert the cuttings in this compost, pressing it firmly round their base ; give them a moderate sprinkling of water, and then place a hand-light or frame over them immediately, and they will not

require much more care except shading from the sun. When water is applied it should be given in the evening, or in cloudy weather, and the glass may be taken off on fine dewy evenings, but must be replaced before the plants become dry in the morning. The potting of these new plants should be performed as soon as it is known that roots are emitted in the manner described for seedlings, and their after treatment, may be assimilated in every respect.

AMICUS FLORIBUS.

### LIST OF ORCHIDEÆ.

(Continued from p. 66.)

295. *Oncidium ornithorhynchum*. Plant pseudo-bulbous; bulbs nearly three inches long, and a little more than one inch broad, oblong, glabrous; leaves in pairs, one foot long, and a little more than one inch broad, lanceolate, acute; flowers produced on a long, slender, half-pendent spike, much branched; flowers pale purple; petals oblong, obtuse; sepals nearly equal, oblong; column denticulate; labellum having the tubercles upon the breast yellow; the flowers are small, but very fragrant, and densely crowded on the spike. This species ought to be in every collection, and well deserves the attention of every cultivator of this tribe of plants. It requires suspending from the roof of the house in a basket well drained, and a compost of turfy peat and sphagnum, well chopped and mixed with small potsherds; it should also be liberally watered while growing, and have a temperature of from 65° to 70°. — *Native of Mexico.*

296. *Oncidium hians*. Plant pseudo-bulbous; bulbs half an inch long, same in breadth; leaves single, erect, crisp, 6 inches long, lanceolate, acute; flower-spike one foot long, a little branched; flowers of a pale straw yellow, destitute of spots; the growth is the same as *O. Harrisoniae*. This species requires pot cultivation, with a free drainage, and a compost of turfy peat, sphagnum, and small potsherds; very little water is required during any stage of its growth; the temperature same as the above. — *Native of Brazil.*

297. *Oncidium cornigerum*. Plant pseudo-bulbous; bulbs oblong, furrowed, 3 inches long and 1 inch broad, cylindrical; leaves single, oval, acute; flower-spike 8 inches long, few-flowered; sepals and petals yellow, spotted with brown; the latter ovate, concave, undulate, obtuse, inferior and narrow towards the base; labellum lobed, linear, and horned. This species also requires pot cultivation, with the same treatment and temperature as *O. hians*. — *Native of Brazil.*

298. *Oncidium flexuosum*. Plant pseudo-bulbous; bulbs oval, compressed, 2 inches long and 1 inch broad; leaves in pairs, oblong, lanceolate, generally from 8 to 10 inches long and 2 inches broad; flower-spike 2 feet long, branched; flowers numerous; sepals pale yellow, spotted with brown, oblong, obtuse; petals obovate, undulate, same colour as the sepals; labellum yellow, lobed, and nearly round. This species is well deserving the attention of cultivators, particularly on account of its easy growth and free flowering; it

should be placed near to a damp wall of the house, and allowed to fasten itself there; this, with a frequent syringing during the hot summer months, will cause it to grow luxuriantly. For pot cultivation it will require a free drainage, and a compost of turf peat, sphagnum, and small potsherds, and a liberal watering while growing, in a temperature of 65° to 70°. — *Native of Brazil.*

299. *Oncidium flexuosum var. majus.* This is only a larger variety of the former; the colour of the labellum is a brighter yellow; treatment and temperature the same. — *Native of Brazil.*

300. *Oncidium ciliatum.* Plant pseudo-bulbous; bulbs ovate, compressed, 2 inches long and 1 inch broad; leaves single, linear, oblong, obtuse; flower-spike erect, flexuose, few-flowered; sepals and petals greenish yellow, spotted with purplish brown, or approaching to a sanguineous colour; labellum yellow. This species requires pot cultivation, with a free drainage, and a compost of turf peat, sphagnum, and potsherds, with a moderate supply of water, and a temperature of 65° to 70°. — *Native of Brazil.*

301. *Oncidium pumilum.* Plant destitute of bulbs; leaves rigid, oval, oblique, erect; flower-spike 8 inches long; flowers yellow; sepals and petals obovate, incurved; labellum three-lobed; lobes ovate, obtuse. This species is of a dwarf growth, but a free flowerer; it requires pot cultivation, with a free drainage, and the same treatment and temperature as *O. hians*. — *Native of Brazil.*

302. *Oncidium citrinum.* Plant pseudo-bulbous; bulbs 4 inches long and a little more than 1 inch broad, of a pale green, scantily marked with brown; leaves in pairs, 1 foot long, crisp, erect; flowers produced upon a spike, of various lengths; sepals and petals yellow, spotted with brown; labellum yellow, but very pale. This is a fine species, but rather difficult to flower; it requires pot cultivation, and the same treatment and temperature as *O. cornigerum*. — *Native of Trinidad.*

303. *Oncidium stramineum.* This species is very handsome, and well worthy of cultivation; its flowers are of a pale straw yellow, spotted with purple. For treatment and temperature it may be referred to the last. — *Native of Mexico.*

304. *Oncidium leucochilum.* Plant pseudo-bulbous; bulbs 3 inches long and 2 inches broad, grooved, tapering a little towards the summit; leaves in pairs, 18 inches long and 2 inches broad; flower-spike 9 feet long, much branched; sepals and petals green, spotted with brown; labellum pure white. This species ought to be in every collection; its flowers are handsome, and remain in perfect beauty for a great length of time; it requires pot cultivation, and a compost of turf peat, sphagnum, and small potsherds, a good drainage, and a liberal watering while growing, with a temperature of from 65° to 70°. — *Native of Mexico.*

305. *Oncidium Harrisoniae.* Plant pseudo-bulbous; bulbs subglobose, one-leaved, crisp, erect, of a whitish green; flower-spike 1 foot long, branched; flowers not very showy; the sepals and petals pale yellow, spotted with purple; labellum yellow, and spotted in the same manner. This species is not very handsome, but still is worthy of a place in a general collection; it requires the same treatment and temperature as *O. hians*, to which it is very similar in habit. — *Native of Brazil.*

J. HENSHALL.

(To be continued.)

## HORTICULTURAL ESSAYS,

*By the Members of the Regent's Park Gardeners' Society.*~~REGD. AT THE STATIONERS' HALL~~

## ON THE CULTURE OF AZALEA INDICA.

By Mr. T. DAVIS.

THE beauties of this interesting group of plants, which so admirably adorn the greenhouse in the early months of spring, expanding their many shaded flowers, from the light and delicately marked variety of *Gledstanesii* to the richly tinted purple of *Magnifica* and *Purpurea grandiflora*, and the brilliant carmine of *Lateritia* and *Danielsiana*, render them universal favourites. What can surpass the delicacy of *Indica alba*, clothed in its mantle of loveliness, gemmed with the coruscations of its beauty, decked with its snowy brightness, and reflecting its brilliancy on every vegetable form around it !

This interesting genus derives its name from *azaleos*, dry, arid habitation. It belongs to *Pentandria Monogynia* of Linnaeus and the natural affinity *Ericæ*, section *Rhodoraceæ*. *A. Indica* appears on record as the first species introduced into England from China, in 1808, and many of the most beautiful are of much more recent introduction ; but the greater number of those which are now distinguished as the most ornamental, are seminal and intermediate varieties.

Amongst the primary considerations which affect the well-being of plants generally, those which relate to the suitability of soils and their practical application, rank the foremost ; as such, the first remarks will be explanatory of those points.

**POTTING AND SOIL.** This operation should be performed immediately after the season of bloom, thereby aiding artificial stimuli in the production of a vigorous and luxuriant growth, by the observance of which the cultivator will be more amply repaid than when the operation is delayed till a later period. The soil most suitable for potting should be six-eighths of well pulverised heath-mould in which vegetable matter predominates, one-eighth of light sandy loam, and one-eighth of sand. The shift most appropriate must be regulated according to the plants and the condition of the roots. Previously to this process,

attention should be paid to removing all the flower stems immediately after the flowers decay, as the continuance of these, by the formation of the seed-vessels, would materially impair their ultimate vigour.

As one of the most important points upon which the success of cultivation depends is invariably connected with a correct arrangement and proportion of the soil, &c., in potting, and as tender fibrous-rooted plants are more liable to be affected by this operation being injudiciously performed than others whose roots are of more vigorous habit, too much stress cannot be laid upon a strict attention to every precaution which is calculated to insure an uniform circulation of the nutritive matter; for it is principally the absence of this condition that causes a superfluity of moisture, which acting upon the spongioles by rendering them incapable of absorbing the elements of nutrition, these conditions must inevitably produce an impaired vigour and premature decline. The vital principle of plants depends upon the co-operation of their organic functions with the agencies that surround them.

The varieties of Indian and Chinese Azaleas, in common with all other plants, whose roots are of a delicate and hair-like texture, should in the process of potting be freely drained. And in this respect the amount of drainage should be regulated according to a natural division which may be observed in the genus; namely, those which partake of a semi-evergreen and robust habit and those which are constitutionally smaller, and more strictly deciduous. The former requires larger pots, and a proportionate amount of drainage, and the latter in connection with smaller growing varieties require smaller pots and drainage in proportion.

It should also be observed, that in repotting, the axis, or connection of the stem with the roots of the plants, should be raised above the surrounding soil; for, as the action of atmospheric and solar agencies are the stimulating causes of vegetation, all other precautions are unavailing where an uniform degree of those agencies is wanting.

**TREATMENT DURING GROWTH.** In respect to growth, this genus more than most others adapted to the greenhouse department, is especially characterised by its capability of enduring a very high and intense heat; and which, during this stage of management, is essentially requisite to produce luxuriant

growth: a forcing house or the cool end of a stove where ventilation is given, and the heat maintained at from 75° by day to 60° by night, will be suitable at this period. It is almost unnecessary to add, that a good exposure to light, by not being overcrowded, is also of great importance, and when atmospheric moisture, by means of evaporation, cannot conveniently be maintained during growth, syringing morning and evening, previous to and after sun-light, will be found beneficial to their vigour and cleanliness.

**TRAINING.** The most suitable period for obtaining lateral growth is as soon as the circulation of sap becomes vigorous, whether as regards pruning back the mature wood, or shortening the premature fore shoots; therefore, where a deficiency of form occurs in the habit of the plants, as soon as the luxuriant shoots have attained two or three inches in length, the top bud or joint should be pinched off or removed with a sharp knife, which, by disposing to side growth, will tend to produce a dwarf, bushy habit.

**SUMMER EXPOSURE.** When the growth has attained its maturity, the admission of air should be increased, or the temperature of the house lowered for a week or ten days, to prevent any check on their removal; after this period they should be removed to a cool greenhouse, or viney, or deep pit, for a few weeks: by the middle of July, the season's growth will become fully ripened, and they may then be placed upon an open border of east or west aspect, admitting of shelter from wind, and from the drip of trees, &c.; they should then be occasionally syringed to remove all dust or insects that may have accumulated on the foliage.

**TRAINING AFTER GROWTH.** As many of the varieties are naturally of a pendent or lax habit, it will be found that the final disposition or arrangement of the branches for the display of bloom will be most readily effected immediately after their mature growth, according to the object the cultivator may have in view, whether intended for pyramidal, horizontal, or fan-shaped display; but one feature should be deemed essential whichever of these forms be preferred, namely, such an arrangement of the lower branches over the margin of the pot, as will hide its formality, and add a graceful effect to the individual character of each plant.

**AUTUMNAL AND WINTER TREATMENT.** Towards the latter end of September, the flower buds will be formed, and the

season arrived for the removal to their winter position, which, when convenient, should be a close viney or greenhouse. During this stage of their management until spring, they require a good exposure to light, and air only admitted in mild, dry weather. This treatment specially refers to the more delicate and partially deciduous varieties, such as *Aurantia superba*, and the varieties of similar habit, with *Lateritia*, *Gledstanesii*, *Variegata*, &c. The general adaptation of *Azalea Indica* for ordinary greenhouse treatment, and its varieties, will be found exactly in proportion to their robust habit and sub-evergreen character, of which *Phœnica*, *Triumphans*, *Speciosissima*, and *Caryophylliflora*, form suitable examples.

The most critical point of management during this season is the caution required in watering, but this difficulty is easily overcome by a strict attention to the division previously named, which suggests the following general rule, that the amount of moisture required whilst in a dormant state is exactly in proportion to their robust and sub-evergreen, or partially deciduous habit; thus the former are capable of assimilating more moisture than the latter, and *vice versa*.

**TREATMENT DURING BLOOM.** About the month of February the plants will manifest tokens of growth by the progressive development of bloom. As these symptoms advance, an increase of air and water will be requisite, and also as the weather and sun-light permit, a gentle but early syringing will materially benefit them.

As regards the temperature during this period, it will perhaps be best understood by saying, that a situation, when they are kept a few degrees warmer, and closer than an ordinary greenhouse generally admits, will be most suitable; but should that be the only convenience, they should then be placed so as not to be subjected to an undue exposure to air; by being thus kept a few degrees warmer, no check will be experienced. From the time that the blossoms begin to show their colour, the plants should be removed to an intermediate or forcing house, when they will expand much finer than when retained in a greenhouse temperature, and during which a dry atmosphere must be maintained, as the purity and delicacy of colour would otherwise be destroyed. When the bloom is well expanded, the plants should again be gradually prepared for a cooler situation, by either diminishing the heat of the house in which they have bloomed, or removing them to a greenhouse,

which will, if required, admit of their being kept close and partially shaded, as a cool temperature with partial shade from intense sun-light is indispensable to the prolongation of their beauty. It will be almost unnecessary to remind the cultivator that brilliancy of colour will be greatly enhanced by an exposure of the plants during the expansion of bloom to intense light; therefore when individual specimens are required for the purposes of exhibition, a much greater elevation of the plants (with shade during intense sunlight) will be the best means for attaining such an object.

**PROPAGATION.** These Azaleas are readily multiplied by cuttings, planted in equal portions of peat and sand, and covered with hand or conical glasses until struck, and also by grafting and inarching; the latter is mostly resorted to as a means of adding vigour in those varieties whose growth is naturally weak. As a general rule, from whatever cause the debility or weak growth of certain varieties may arise, it may be assumed, perhaps, in all cases, that a constitutional vigour is imparted by their union with more robust varieties. That division of which *Lateritia*, *Gledstanesii*, and *Variegata*, form the type, will be readily recognised as adapted to the foregoing remarks, by their naturally small and slender habit of growth.

**PROPERTIES.** The honey obtained from *A. pontica* is possessed with powerful narcotic qualities, and is recorded by Xenophon to have caused the deaths of several soldiers in the famous retreat of the ten thousand Greeks.

**DISEASES.** The most common disease to which the genus appears subject, is a species of fungi making its appearance on the underside of the leaves, which may in general be attributable to excessive moisture, acting upon an impeded circulation of sap in the leaves, &c., and which may be further assigned to an "undue action between the atmosphere in which they are placed, and the absorbing power of the material in which they are grown." From the foregoing remarks the cultivator will now readily perceive that a strict attention to due proportions of soil in potting, to maintaining an uniform temperature during the progressive stages of growth, and to the proper state of the atmosphere during such growth, are the only sure means of securing a healthy and vigorous condition of the plants. An eminent cultivator\*, speaking of the diseases

\* Mr. J. Barnes of Bicton, in the "United Gardeners' Journal."

to which this genus in common with others is liable, recommends the following as being efficacious in the destruction of the *thrips* and other insects:— “Take a peck and a half of soot, and put it into one hogshead of soft water, stirring it well with an old broom or batten, every day for ten days or a fortnight; then strain off the water through a fine sieve or piece of canvas into another tub, on a peck of charcoal, and drop into it afterwards one or two lumps or about three pounds of fresh lime, in about two days after strain it again, and it is then clear enough to syringe with.”

*Pine-apple Place.*

## LIST OF NEW PLANTS.

### ACANTHACEÆ.—*Didynamia Angiospermia*.

*Aphelandra aurantiaca*. This is the handsomest stove shrub that has been introduced for a long time, and, in the estimation of cultivators, must class with *Ixora coccinea*, *Aphelandra cristata*, the *Hindsias*, and other front-rank species.

It was exhibited at a late meeting of the Horticultural Society, by Mr. Henderson, of Pine-apple Place, under the title of *Hesemasandra aurantiaca*, a name not to be found in any botanical books in our possession. Can it be Schrader's *Synandra amœna*, the *Aphelandra ignea* of Nees Von Esenbeck? concerning which we find nothing beyond the names in Dietrich's “Synopsis Plantarum.” We have only seen it on the occasion just alluded to, but we could not then perceive anything to separate it from the well-known genus *Aphelandra*, and thither it is accordingly now referred.

Colourers are quite unable to give the soft and brilliant glow of the rich orange-coloured flowers, which may perhaps be compared with that of the ripest side of a Brussels apricot when coated by varnish.

The general character of the plant is somewhat more robust than that of *A. cristata*, and it is presumed to be a native of South America. — *Bot. Reg. 12—45.*

*Ruellia lilacina*. The stove of the Royal Botanic Gardens of Kew is indebted for this handsome Ruelliaceous plant to Mr. Glendinning, of the Chiswick Nursery; but of its native country, I regret I can learn nothing. Its fine dark and glossy foliage, with large full lilac-coloured flowers, which are produced from time to time during the greater part of the summer months, renders it well worthy of a place in the hothouse.—*Bot. Mag. 4147.*

### GENTIANACEÆ.—*Pentandria Monogynia*.

*Eustoma exaltatum*. It appears from the researches of Dr. Grisebach, that *Lisianthus Russellianus*, this plant, and another or two like them, constitute a peculiar genus, which Mr. Bentham called *Urananthus*, but which had been previously named *Eustoma* by the late Professor Don. It is therefore necessary to cancel the common name of this plant in favour of that now given. Under the designation of *Lisianthus glaucifolius*, the species is circulating among gardeners as something new; but it is in truth a species

respectable for its antiquity, having been described years ago by Lamarck, under the name of *Lisianthus exaltatus*, and by Jacquin as *L. glaucifolius*.

The blossoms resemble those of *Eustoma* (*Lisianthus*) *Russelianus* except that they are smaller, and the foliage is very neat; the greatest fault in it is its stiff, naked-branched habit. It is a native of various parts of North America, and requires to be treated in the manner usual with *Russelianus*. — *Bot. Reg.* 13—45.

**MARANTACEÆ. — *Monandria Monogynia*.**

*Calathea villosa*. A native of Demerara, whence it was sent by the Chevalier Schomburgk to Messrs. Loddiges, with whom it flowered in July, 1843. It has very shaggy leaves, and long, cylindrical-formed flower-spikes, from which proceed a number of curious yellow flowers; it is a very tender stove plant, requiring an average temperature of 70°. — *Bot. Reg.* 14—45.

**MYOPORACEÆ. — *Tetrandria Monogynia*.**

*Myoporum serratum*. A native of Tasmania, where in cultivation it becomes a pretty, round-headed shrub, whose flowers are succeeded by blue fruit. In our gardens it forms a neat bush loaded with a profusion of white flowers, as large as those of hawthorn, and spotted with purple. It is a greenhouse plant, which should be potted in sandy peat, such as heaths are generally grown in. During summer an ample supply of water should be given, and air at all times, when the weather is favourable. For a few weeks in winter, water once or twice a week will be sufficient. Fire-heat should never be applied, except to keep off frost. — *Bot. Reg.* 15—45.

**SCROPHULARIACEÆ. — *Didynamia Angiospermia*.**

*Penstemon gentianoides* var. *diaphanus*. This is a very handsome and nearly hardy perennial, growing two or three feet high in any good rich garden soil, and becoming rather woody next the ground. It differs from the well-known *P. gentianoides*, in having rather larger flowers, which are almost colourless on the under side of the tube, which is, moreover, so thin as to be semi-transparent, and to allow the filaments to be perceived through it. It was raised from seeds received from G. F. Dickson, marked from the Terra Fria of Mexico. — *Bot. Reg.* 16—45.

**AMARYLLIDACEÆ. — *Hexandria Monogynia*.**

*Phædranassa chloracra*. This plant has recently been removed from *Phycella* by Dr. Herbert, who has given it the present name on finding it constitutes a peculiar genus. It is one of the curious bulbs met with by Mr. Hartweg in Peru; the flowers are crimson and green, intermingled with yellow; they are numerously produced in the manner of *Phycella*, and like that genus it requires greenhouse treatment. — *Bot. Reg.* 17—45.

**LEGUMINOSÆ. — *Decandria Monogynia*.**

*Aotus gracillima*. A very elegant Swan river species introduced to the Royal Gardens of Kew by Mr. James Drummond. Besides its glabrous branches and foliage, it may at once be known from the old *A. villosa* by the very copious flowers, so abundant on the branches as to conceal the leaves of a great portion of the branches. Thus its beauty will recommend it to every greenhouse. It is a rather tall-growing, slender shrub, with twiggish branches; the leaves are small and narrow, and the flowers are produced two or three from the axil of each leaf for a considerable distance up the stems, so as to form a dense cylindrical mass of many inches in length, of a lively yellow colour, spotted with red. — *Bot. Reg.* 41—46.

ORCHIDÆ.—*Gynandria Monandria*.

*Oncidium bicallosum*. An inhabitant of Guatemala, whence it was introduced to our stoves by Mr. Skinner. There exists a great similarity between the present plant and *O. Cavendishianum*, and *O. pachyphyllum*; the three indeed appearing to be merely varieties of the same form. *O. bicallosum* has no pseudo-bulbs, the foliage is large, singularly thick, and carinate; it has a very long peduncle rising from the base of the leaf, and bearing a many-flowered panicle which varies much in size and ramification. The flowers are large and handsome, yellow, slightly tinged with green on the sepals and petals; these are all spreading and obovato-spathulate, but not equal; the lip is large, three-lobed, the middle one very large, and slightly divided at the apex. It is a free-flowering and desirable species.—*Bot. Mag.* 41—48.

SOLANÆ.—*Pentandria Monogynia*.

*Lycium fuchsoides*. A very handsome plant, attaining a large size, possessing fine ample foliage, and producing a copious display of large brilliant orange-scarlet flowers. It was raised in the Royal Botanic Gardens of Kew, from seeds, sent by Dr. Jameson, from Azoques in the Quitinian Andes, where it is used by the natives for fences.—*Bot. Mag.* 41—49.

BROMELIACEÆ.—*Hexandria Monogynia*.

*Barbacenia purpurea*. This beautiful little plant was the first of the genus known in this country, and is a worthy companion of the orange-red flowered *B. squamata*; the seeds were accidentally discovered by the Hon. and Rev. W. Herbert, of Spofforth, amongst a quantity of Brazilian moss. Mr. Gardner, in his recent exploration of that country, met with it near the foot of the mountains about two miles south of the town of Rio Janeiro. It there grows abundantly in places where a little vegetable mould has accumulated, amongst which it vegetates and blooms with the utmost luxuriance. All the leaves spring from near the same point, forming a tuft round the base which scarcely elongates into a stem. They are of a very rigid nature, and differ from those of *B. squamata*, in having larger and more distant spinous serratures at their margins. The plant is also distinguished by the flower-stalk being considerably longer than the leaves, and by the deep rich purple colour of the flowers. A warm moist atmosphere, and a proportionate and uniform degree of heat about the roots in the growing season, together with a porous soil, partly composed of well-rotted leaves, through which water can easily pass, and any excess drain away, seem to be the essential elements in the maintenance of a high state of cultural perfection.—*Pax. Mag. Bot.*

EPACRIDACEÆ.—*Pentandria Monogynia*.

*Styphelia tubiflora*. Long known to British collections, but seldom seen in a state of perfection, owing to a difficulty experienced in its management, by the old system of employing small pots and finely-sifted mould. The general aspect of the plant is not strikingly dissimilar from many species of the kindred genus *Epacris*; the stems are furnished with small leaves, which are sometimes linear-ovovate and sometimes somewhat heart-shaped at the base; the flowers are borne all along the shoots of the previous season, and spring from the bosom of the leaves; they are remarkable for their handsome pendulous tube, and the delicacy of its rich crimson colour; and also for the rolled back segments of the limb being furnished with a fringe of numerous crimson hairs. Grown in a porous soil, with the treatment usual for *Epacris*, it will form a very handsome object throughout the winter months. It is a native of the neighbourhood of Port Jackson in New South Wales.—*Pax. Mag. Bot.*

## TO CORRESPONDENTS.

ONE OF US.—Prune your plant of *Passiflora princeps* immediately, or the flowering will be very late, cut the weak straggling shoots back to within four or five joints, and shorten the strongest; it is seldom this species succeeds in a greenhouse, and probably the long continuance of severe weather we have experienced this winter has affected it — we shall always be happy to answer your inquiries.

J. G. S.—The traps mentioned in our last may shortly be procured in any quantity, at 82. Fleet Street; it is essential to perfect success that they be kept clean. You will find a selection of the best Pansies in the correspondence of the February No., to which we must beg to refer you.

A SUBSCRIBER.—Sow your Verbena Seed directly, some of it will probably vegetate at once, but the greater portion is more likely to remain months before it will appear—a gentle hot-bed is the best place for it.

T. S.—No. 6. of your seedling Cinerarias is the only one we should think of preserving; colour light cerulean blue, white centre, form and substance tolerably good.

AN INQUIRER.—The past winter has indeed been a severe trial for heating apparatus of all descriptions; so far as our own experience goes, we are even more strongly disposed in favour of tanks; we have them of wood, cement and iron, and all have done their work admirably, without trouble, and with but comparatively small expenditure of fuel.

AN AMATEUR.—The following ferns will probably suit you; they are pretty, distinct, easy of management, and not expensive:—*Polypodium aureum*; *Adiantum aethiopicum*; *A. iapillus Veneris*; *Pteris serrulata*; *P. hastata*; *P. chinensis*; *Blechnum occidentale*; *Asplenium bipartitum*; *A. flabelliferum*; *Nephrodium exaltatum*; *Aspidium molle*.

## CALENDAR FOR APRIL.

THE severe winter, through which we have passed, has so retarded vegetation that nearly all hardy plants have still to expand their blossoms. Even the hazel has barely been able to loosen its yellow catkins to the breeze; and the snowdrop has hardly earned its name among the storms of this inclement season. To the collector of native specimens, therefore, the present spring will be a busy one, as nearly all the plants mentioned in the previous calendars for this year will still have to flower, whilst to those who like spring walks, (and who does not?)

the approaching months promise a richer variety than usual in the amount of vegetable forms in their most attractive dresses at one time. The number of additional species this month it is impossible to state, for, whilst Lindley and others make the number of native willows not above thirty, more than seventy distinct forms are figured in "English botany;" so much do the plants vary according to soil and exposure. Again, the primrose, cowslip, and oxlip, are generally considered as distinct, yet the Rev. Mr. Henslow has seen them all growing from the same root. Nearly the whole of our forest trees will flower during the present month; but, perhaps, a point almost as interesting in their economy as observing and securing specimens of their bloom will be found in noting the very great difference which occurs in the leafing of individuals of the same species. For instance, in a hawthorn hedge, or clump of oaks, very remarkable variations in the time of expansion and outline of the leaf may be noticed. The Glastonbury thorn and Cadenharn oak are extreme instances.

The flower garden will be a busy spot this season. Hardy annuals should be sown, and herbaceous plants regulated, the grass and walks carefully looked after, and preparation made, as far as possible, for turning out the summer bedding plants. The destruction among these must be remedied, as far as possible, by continually propagating the survivors, and hardening them off as soon as well rooted. Half-hardy annuals should also be sown on slight hot-beds, taking care to *draw* the plants as little as possible.

Many green-house plants may be propagated this month, where it is desirable to increase the collection by such means, and shifting the plants must also be regularly attended to; but while avoiding to give the plants too small a shift, as some assume all old gardeners did, it will be as well, also, not to fill the houses with large pots and small plants: the medium in this, as in most other cases, will generally be found most satisfactory. A gradual increase of heat and air must also be allowed, taking care not to expose the plants to dry cutting winds.

In the stove, re-potting the plants must also go on, and, in conjunction with increased light, heat, and moisture carefully administered, the plants can hardly fail to progress favourably. Any foreign seeds should also be sown on hot-beds, plunging the pots in tan, sawdust, or other similar material.

The time thrown away every year, in many places, in sowing and potting off plants raised from seeds received from various parts of the world is enormous; seeds of things long in the country, of no interest but to the botanist, or too large for ordinary houses, or that do not produce flowers under ordinary time or circumstances, form the bulk of these importations, and only lead to dissatisfaction and loss of time. The temperature should range from 80—85° by day to 60—65° during the night.

D. M.

**FLORIST'S FLOWERS.**—Never, in any previous season, did the florist stand so much in need of a large stock of patience, as during the past month the weather has been “against every thing;” that patience must now be equalled by his perseverance, for much indeed has yet to be done. Auriculas will require an infinitude of care to recover them so as to bloom well; all the encouragement possible must be given them by the admission of air in the day, together with a proper supply of water, and careful protection at night; thinning the blooms, dressing, cleaning, and occasionally shading must be regularly attended. Finish potting picotees and carnations as speedily as possible, as also the pruning of roses. Examine minutely the foliage of tulips, in order to remove all appearances of gangrene, which should be cut clean away; it will still be necessary to protect them in cold weather. Young dahlia plants should be gradually hardened in cold frames, and others struck. The planting of all kinds of bulbs that have been delayed through the frosts must be brought to a close at once, or they will be lost, and extra exertion must pervade every department to recover our vantage ground.

P.





FOWLES' SEEDLING FUCHSIA 'VUURBE'

THE  
FLORIST'S JOURNAL.

MAY, 1845.

ON FUCHSIAS.

WITH AN ENGRAVING OF FOWLE'S VUURBERG.

BUT little of a novel character connected with the management of Fuchsias has presented itself, so as to require particular notice since the last occasion we had for speaking on the subject; yet as the production of first-rate specimens of even these plants is not of universal occurrence, we have thought a *résumé* of the matter may not be uninteresting or without its use. It is now near eighteen months since we figured that beautiful variety "Gigantea," which still maintains its place as a most desirable object in every collection; and in that period we are gratified to observe the attention they have arrested, which must lead to the production of varieties yet undreamt of. Horticultural Societies are now, and must ever continue, offering prizes for them as regularly as for any other florist's flower; the effect of which will be an increasing desire on the part of the culturist not only to obtain new kinds, but also to realise perfection in those he already possesses.

Fuchsias are undoubtedly plants of the easiest culture, where the necessary conveniences are at hand, but unfortunately they are too often regarded as of but secondary consequence—mere accessories,—and thus have to bear with indifferent attention in the worst situation of the house—tolerated as it were in only such places that all other plants refuse. This is

injudicious and unfair treatment, considering the vast accession of ornament derivable from the family ; and we once fondly imagined that the presence of so many camellia, heath, and geranium houses as are to be seen would have induced ere this some lover of the tribe to set a most honourable example by devoting a house to the exclusive management of these beautiful plants. It is unnecessary to enlarge on the highly ornamental feature such a structure would constitute, for that is obvious. There is indubitably a far greater variety of form and colours to be selected from among them than in either of the families named, to which a separate house is considered necessary ; and we can only say we hope still to see it, feeling certain that when once adopted, and their beauties thus made apparent in the manner they deserve to be seen, the practice will soon become general.

The importance of providing a period of rest for mature plants, pointed out on the occasion before referred to, is more fully established by the experience of another season's management: those which were allowed to remain quite dormant through the entire winter exhibited a decided superiority over others subject to a continuous excitement ; that it should be so, is no more than what a careful consideration of the native habits of the plant would have led any one to expect ; and we shall not be surprised to find many other plants benefited to an equal extent by similar treatment. It must be explained, however, that it is not advisable to carry out this system of entire inactivity quite so fully with young or small plants as with those which have produced flowers the previous season ; or it may happen that from want of opportunity to complete a due store of nutriment they will fail to shoot again on the application of stimuli. This, however, is a matter in which a very little practical information will set any one right.

The use of peat for delicate growing kinds is gaining ground in the estimation of most growers, who find the general health of the plant much improved by it, which consequently induces a more copious display of flowers ; and this, whether by its chemical properties, or by the additional vigour imparted to the plant, we will not pretend to say, have a richness and brilliancy of colouring far surpassing those of former years.

The system of removing them from small pots into the largest size they are intended to fill seems now to be univer-

sally conceded to, as the most appropriate method of insuring fine, large, and healthy specimens. At the commencement of the season the plants are usually induced to push forth their new shoots in as small a space as they can be conveniently got into. This is for convenience sake; and as soon as they are well established in these small pots, shifted at once into others large enough to supply their wants throughout the remainder of the season. Here the progress is astonishingly rapid for the first two or three months, and then the warm dry weather of summer is at hand to ripen the wood thus quickly formed, and to facilitate the required production of flowers.

Many opinions have been expressed as to the best mode of training fuchsias; our own is that those kinds possessing a naturally strong, erect habit, should be frequently stopped while young, to induce a bushiness, which moderates the vigour by causing an increase of the foliated, and so also of the flower parts, continuing to lead the new branches upwards, inclining to either side, so as to form a perfectly round plant; while on the other hand, those having a weak pendant character should be led up with a single stem to form the centre of the plant, and the lateral branches from it allowed to fall gracefully downwards. Annexed is a descriptive list of a few of the best varieties, both new and old; in which the latter character is distinguished by an asterisk.—EDITOR.

\* *Albion*. Tube and sepals pale peach; corolla crimson, large size; free bloomer, dwarf habit.

*Bridegroom*. Tube and sepals pink; corolla light red, large size; free bloomer, vigorous habit.

*Brixtoniensis*. Tube and sepals crimson; corolla crimson, extra large size; abundant bloomer, medium habit.

\* *Coronet*. Tube and sepals buff colour; corolla carmine, medium size; free bloomer, vigorous habit.

\* *Exoniensis*. Tube and sepals crimson; corolla purple, medium size; abundant bloomer, pendent habit.

*Expansa*. Tube and sepals bright rose; corolla lilac, expansive, large size; free bloomer, medium habit.

*Flamingo*. Tube and sepals pale rose; corolla brilliant carmine, medium size; most abundant bloomer, vigorous habit.

*Formosa elegans*. Tube and sepals carmine; corolla blue, medium size; free bloomer, dwarf habit.

\* *Gigantea*. Tube and sepals deep rose ; corolla crimson, very large size ; free bloomer, vigorous habit.

\* *Lowerii*. Tube and sepals crimson ; corolla blue, medium size ; abundant bloomer, dwarf habit.

*Magnet, Smith's*. Tube and sepals bright vermillion ; corolla bluish purple, extra size ; free bloomer, medium habit.

*Queen of the Beauties*. Tube and sepals pale ochrous white ; corolla purple-crimson, large size ; free bloomer, medium habit.

#### ON THE CULTURE OF GOMPHOLOBIUM POLYMORPHUM.

My practice runs thus :—about the latter end of June, or the beginning of July, I take cuttings from the parent plants, making them in the usual way ; and having well drained a wide-mouthed thirty-two sized pot, by whelming a smaller one over the hole at the bottom, and placing some rough potsherds round the small pot, then a layer broken much smaller, with some moss over the whole to prevent the soil intermixing with the drainage, I fill it with a mixture of peat, loam, and silver sand in equal proportions, spreading a layer of the sand over the top, which immediately receives a gentle watering to prevent its running into the holes made to receive the cuttings, and after the insertion of these I give the whole a good watering, and allow it to stand awhile to settle and become dry. I then cover them with a bell-glass, and plunge the pot into a moderately warm hotbed possessing a gentle bottom heat, being particular to keep the bell-glass as dry as possible by frequent wiping. In about six weeks they will begin to form new leaves, which may be regarded as an infallible symptom that they are protruding roots ; and in three weeks or a month after this they may be potted off separately into thumbs, returning them to the hotbed, which should be kept close for a week or two, and then the plants may be gradually hardened off, to get them sufficiently strong to stand through the winter in a warm greenhouse. About the middle of February I remove them to the stove, where in three or four weeks they will require re-potting, placing them in large sixties, or forty-eights, continuing the

stove treatment till May, when they are placed in the greenhouse again, keeping it rather closer than usual for a day or two, and gradually inuring them to the air, as with ordinary greenhouse plants. In June I again shift them, this time into twelve-sized pots thoroughly drained with potsherds and pebble-stones, mixing a number of the stones with the soil, which should consist of sandy peat, and if it is not naturally so, it should be made such, by adding silver sand; and on no pretence must the cultivator ever think of sifting the soil, for the rougher it is the better. After the shifting is complete, a trellis is fixed to the pot on which the plant is trained, and I consider it will not require to be again shifted for two or three years, only enlarging the trellis as the plant may increase in size. By the above treatment I find that, in the course of two years, a fine compact plant may be obtained, particular attention being paid throughout the whole period to preserve it moderately moist.

*Sidcup.*

GEORGE STANLEY.

#### CULTURE OF IOCHROMA TUBULOSA (HABROTHAMNUS CYANEUS).

THIS is a handsome, free-flowering, deciduous greenhouse or half-hardy shrub, growing about four feet high. It grows freely in an equal mixture of sandy loam and peat; but when the plants are young, they should be grown in a richer soil, in order to gain size and substance quickly. When they have attained a considerable size, they require to be kept rather dry, and to be stunted in the pots. A good way to treat the plant is to turn it when young into the open border in a very rich soil, about the end of May, to supply it abundantly with moisture during the summer, and to take it up about the end of September, pot it, keeping it in a close place for a week or two, to recover the shift; and then to place it in a rather dry situation, where it is secure from frost for the winter. About the middle of the following March cut it back rather freely, and top-dress the soil in the pots, but by no means re-pot it; allow it to start in a rather cool, but not very dry situation. As it advances, water more freely, and finally keep it rather close and damp to cause

it to flower freely. It is easily increased by cuttings of the half-ripened wood, put in sand, and kept close in a warm situation. It blooms freely from July to October, having sometimes upwards of thirty flowers in a cluster. — *Bot. Reg.*

## ON RAISING MARTYNIA FRAGRANS.

THE frequent ejaculations of disappointment in the raising of this beautiful annual from seed, that are poured forth every season, seem to imply that its proper management is not yet clearly understood; some detailed remarks on the subject may, therefore, possess their interest, especially as it is not yet too late to be serviceable for the present year. It is, unfortunately, too well known that the ordinary treatment usual for plants of the same character, or what are commonly termed half-hardy annuals, fails of success when applied to the present subject; and what renders the difficulty most inexplicable is, that though other plants, even from the same locality, readily conform to their altered circumstances, yet the Martynia obstinately refuses to yield to the culturist's art, until subject to applications of the most strenuous nature; the horny envelope, of the plumule, defying all its attempts to force a passage until removed by artificial means, or the effects of an extraordinary stimulant. Observing in all the numerous cases of failure which came under my notice during the first season that my attention was directed to this plant, that the seed remained perfectly sound in the mould, although buried for months, I felt nearly certain that its removal would greatly facilitate the development of the embryo bud, if it was not, indeed, the only obstacle to its growth. Acting on this idea, I invariably cut away the greater portion of the hard, woody skin, carefully preserving the white cotyledons beneath from injury, and then apply a bottom heat, which, with any other vegetable form to act upon, might well be termed extraordinary. The place in which I have induced seeds of Martynia fragrans to vegetate freely for the last three years is nothing less than a hot-water tank, used to heat a small propagating house, the average temperature of the water in contact with the pot containing the seed being about 160°,

frequently more ; the seed is sown in light fibrous peat, and the pot plunged about half its depth into the water. Three weeks is the usual period required for the appearance of the plants above the surface of the soil, when they are immediately removed to other pots, and placed in a genial hotbed ; and after another three weeks of attention in this place are gradually hardened, when they are capable of enduring almost any treatment ; for, however difficult in the first instance to raise, there is scarce another plant so manageable in after-growth (except as regards dwarfing), and certainly none which repay the culturist with more specious or sweetly-scented flowers, than does the *Martynia fragrans*. Why do not gardeners turn their attention to the hybridizing of this genus ?

HORTULANUS.

## LIST OF

(Concluded from p. 81.)

306. *Oncidium raniferum*. Plant pseudo-bulbous ; bulbs one inch long, tapering a little towards the apex ; leaves in pairs, three inches long and narrow ; the flowers are produced on a spike, six inches long, branched, they are yellow ; the sepals and petals being spotted with brown ; the labellum is also marked with brown ; the tubercles or crest have the appearance of a frog crouching, hence the specific name. A very singular little species, requiring to be grown upon a small billet of wood, with a little moss fastened about it ; it may also be grown in small pots, with a compost of turfy peat, a little sphagnum, and very small potsherds ; a very little water will be required during its growth, and scarcely any when resting ; temperature 65° to 70°. — Native of Brazil.

307. *Oncidium Russellianum*. Plant pseudo-bulbous ; leaves in pairs ; flowers produced on a long spike ; sepals and petals brown, intermixed with purple ; labellum purple. This rare and lovely species is decidedly distinct from any other of the tribe ; the flowers are very large ; it requires pot cultivation, in a compost of turfy peat and small potsherds, with a liberal supply of water if a free drainage is underneath (which I particularly advise), and a temperature from 65° to 70°. — Native of Brazil.

308. *Phalanopsis amabilis*. Plant destitute of pseudo-bulbs, but composed of a number of leaves 5 inches long, and about 3 inches broad, oblong ; flower-spike 2 feet long ; flowers paniculate, and of a beautiful dazzling white ; sepals a little more than 1 inch long, and half an inch broad, oblong, obtuse ; petals nearly 2 inches long, and the same in breadth, suborbiculate, unguiculate ; labellum three-lobed, the outer lobes ovate, obtuse, incurved ; base lutescent ; the middle lobe has a pair of horns resembling the antennæ of

an insect, placed at the apex, the 3 lobes are splendidly marked with purple at the base of each. This truly fine species is extremely scarce, and indeed cannot be purchased; its flowers will remain in perfect beauty for upwards of three months, but are devoid of scent. In cultivation it should be grown upon rough billets of wood, either with or without sphagnum upon them; but the plant will require dipping into water three or four times a day when in a growing state; temperature from 75° to 80°. It is also known as the *Epidendrum amabile* and *Angræcum album majus*, of some botanists. — *Native of Manilla.*

309. *Saccolabium guttatum*. Plant destitute of pseudo-bulbs; the leaves are distichous, or placed in two rows opposite to each other — long, falcate and abrupt, the ends having the appearance of having been bitten off; the flower-spike proceeds from the base of the leaves, and terminates in a long raceme of beautiful rose, pink and white flowers. This and the following species may be regarded as the handsomest of the whole tribe — *S. Blumei*, *S. præmorsum*, *S. giganteum*, and *S. denticulatum*; all of them partaking of the same character, though differing in the size of their flowers. They should be fastened upon rough oak billets with a little sphagnum; while growing, or at least from the latter end of April to the end of September, they will require watering or immersing in water two or three times a week, and syringing a little every day, which should be done towards the evening; but during the resting season very little water will be required; the temperature most suitable for them is from 70° to 85° or 90° by the aid of sun-heat. — *Native of India.*

310. *Stanhopea Martiana* var. *bicolor*. The genus Stanhopea has so lately been spoken of in the Florist's Journal, that it would be superfluous for me to enter on its management; and as my time here grows exceedingly short, I shall content myself with the description of the above new variety. Plant pseudo-bulbous; bulbs similar to those of the well-known *S. Devonianum*; the leaves, however, are much shorter, undulate, terminating in a sharp point. It is a most beautiful variety, and in the magnitude of its flowers is second only to *S. tigrina*; the sepals are straw-colour, gradually fading to nearly a pure white, faintly marked with clusters of little dots; the petals are white, with large spots of crimson; the labellum ivory white, having a slight discolouration near the base; the horns are long, and taper into a kind of tendril, and are parallel with the epichilium.

*Vanda cristata*, *V. teres*, and *V. Roxburghii* are most beautiful, nay magnificent plants, and I regret exceedingly that I have no opportunity for describing them; their fragrance is so delicious, as to render them deserving of the best care the cultivator can bestow; for management they may be referred to *Saccolabium* in every particular.

I conclude this list with the mention of that highly ornamental and fragrant genus *Zygopetalum*, too many of which cannot be grown. *T. Mackayi*, *T. rostratum*, and *T. crinitum*, are perhaps the best of them. The whole are of the easiest management, requiring only to be potted in the usual mixture of peat and sphagnum, with plenty of moisture while growing, and to be kept in a temperature of about 65°.

J. HENSHALL.

[Our respected correspondent Mr. J. Henshall is, we find, about leaving England for Java, and other parts of the East, in search of these lovely and interesting plants. We are selfish enough to regret it on our own account, but most cordially wish him every success in his arduous undertaking, and beg to thank him for favours received: we shall, however, from time to time, look for many interesting communications respecting his journey.—ED.]

## HORTICULTURAL ESSAYS,

*By the Members of the Regent's Park Gardeners' Society.*NOTES ON THE CULTURE OF THE GRAPE VINE  
(*VITIS VINIFERA*).

By MR. JOSEPH JORDAN.

A NUMBER of eyes, sound and bold, from a piece of well-ripened wood of the last year's growth, were potted on or about the first week in February, 1843, in 32-size pots, one eye in a pot; and as soon as they were well rooted in the pots, they were shifted into 24's, and kept in the same heat as before, which was from 60° to 70°: they were shifted when they required it, throughout the summer. Some of them were planted in the back border of a viney়; and in November 1843 they had made from 12 to 14 feet of ripened wood, which was cut down to about 10 feet; and in the present summer (1844) bore from twelve to fourteen bunches of fruit, each bunch averaging 1 lb. in weight: twelve vines were then planted, viz. one Black Prince, which bore thirteen bunches; one Black Teneriffe, fifteen bunches; two White Royal Muscadine, twenty-seven bunches; eight Black Hamburgh, twelve to fourteen bunches on each plant. The remainder of those that were raised were kept in pots and tubs, and this summer (1844) have made canes from 18 to 20 feet long, and very large; they are intended to be forced early in the present season, viz. 21st December, 1844, when they will be less than two years old from the eye. But they must have good rich soil all along, and manure water in summer.

In respect to fire heat, nature should be followed as far as possible, keeping them hotter by day than night. Now in the morning, after being cool through the night, the vines will have a small drop of water on the angles of their leaves, which is a certain sign of the plants being in a good state of health. About 55° by night is quite hot enough; they will sustain no

injury at that heat, but will grow stronger than if they had a heat of  $65^{\circ}$  or more. They must have fire heat and air during the day, and have the house closed up warm, say about  $65^{\circ}$  or more, with little fire, as plants do not want so much heat when they are in a state of rest. If in mid-winter they must have more.

The Muscats this season were not forced at all; they were raised from eyes in 1841, and were planted in May 1842, and made shoots the whole height of the house, which is about 24 feet. In the winter of 1842 they were cut down to the bottom to give them strength, and in 1843 they made 35 feet of sound well-ripened wood, which was cut down to about 18 feet in the winter of 1843, and have this year borne a most excellent crop of good ripened fruit.

If the fruit is not wanted early, they had better not receive any fire-heat before they are in bloom, which will be about the middle of May. In April, when they break, they must be continually syringed, night and morning, till they are in bloom, and plenty of air given when the weather will permit: no fire should be given them but when they are in danger of frost. When the shoots are long enough, they should be tied to the wires with great care, and only one bunch should be left on each shoot. Those eyes that broke without fruit should not be pulled off, as is generally the case, but should be broken off at the second eye, which leaves the embryo bud at the base quite perfect, which would not have been the case had the shoot been pulled off. When they are in bloom, the house must be kept very hot without air, except on very still days, and when there is no wind: about  $90^{\circ}$  by day, and  $65^{\circ}$  or  $70^{\circ}$  by night. It should not be kept very dry, but the floor of the house should be watered night, morning, and mid day, if requisite, but not the flues or hot water pipes, as it would raise a great steam, and be injurious to the bloom. As soon as all of the bloom is set, and the young berries have begun to swell, syringing may be commenced again; it should be done in the morning, and in the evenings by half past four o'clock, closing the house at the same time. They should have plenty of air and fire, but not be kept so hot as when in bloom. Grapes set best in a hot humid atmosphere, but they must not be wetted over the leaves, for this would cause the bloom to be *abortive*, and not set kindly. Continue syringing till the

grapes are of the size of large green peas, steaming the house by sprinkling water upon the flues or hot-water pipes.

When the grapes are well set, and about the size of large peas, begin to thin them, which should be done with great care, with a pair of small sharp-pointed scissors. Take care to touch the bunch or berries as little as possible with the fingers, but have a small piece of wire bent at one end, to hook hold of the bunch. The thinning should be completed as soon as possible, as it is at this time or near it that the fine beautiful bloom comes on ; and when once disturbed, this never comes on so much again. Give them two or three good syringings backwards and forwards of the house, and then discontinue it : still keep the floor of the house wet, but do not wet the flues too much. Continue the fire heat and plenty of air till the grapes begin to colour, after which give them plenty of air by day, and on warm nights also, in front and top as well, when there are no signs of rain ; but no fire, except on very dull days or in wet weather, and then it should be given by day, and air allowed at the same time to let off the steam from the flues or pipes. Observe at this time to keep the fruit very dry by firing, and giving air when required : these grapes may be kept till Christmas, or the second week in January. It will be necessary to go over them every few days, to cut out all decayed and damaged berries.

The border should not be more than 18 inches below the surface of the ground. It may be as much as 3 or 4 feet out of the ground, which is much the best way, as when the roots have any thing wrong with them, they can be the more easily examined. The border should be well drained by a drain up the middle, about 16 or 18 inches wide, and the same in depth, filled with a few branches of trees at the bottom, and brick rubbish over them. The bottom of the border should slope both ways to the drain, and have some brick rubbish at the bottom, which will take off all superfluous water ; but where the border is so far out of the ground, it is hardly required.

The border should be made with the following compost, as near as it can be had : — Three quarters of top spit from an old sheep down (not more than 6 inches deep), or loamy pasture, one quarter of good old rotten dung ; to this add one-tenth of the whole of good lime (not too hot), a small quantity of ground bones : bullock's blood, or drainings from a butcher's shop,

is very good. If this cannot be got, use linseed cake, but very sparingly. Mix them well up together, but do not tread the soil down any more than cannot be avoided: allow for settling, and when the vines are planted, draw out the roots very carefully, and spread them in the ground near the top, as the roots like the air; give them a good watering when you plant them, and manure the border at top in winter, and fork it over in the spring.

Dec. 11. 1844.

## LIST OF NEW PLANTS.

### LOBELIACEÆ. — *Pentandria Monogynia*.

*Lobelia thapoidea*, syn. *Rapuntium thapoideum*, *Geniostoma brasiliense*. Much as the genus *Lobelia* has been reduced in amount of species by the numerous genera that have been of late separated from it, especially *Siphocampylos* and *Tupa*, there are yet enumerated in De Candolle's *Prodromus* 173 species, and many new ones exist in the Herbariums of Botanists. Among the most remarkable of the genus for stateliness and showiness are the *L. uranacoma*, *L. exaltata*, *L. organensis*, and the present subject, which so far excels the rest, as to have obtained from De Candolle the epithet of "*lobeliacum princeps*." Mr. Gardner, to whom our stoves owe the possession of this fine plant, gathered specimens measuring eight feet in height; the habit and foliage of the plant somewhat resemble those of our great Mullein *Verbascum thapsus* (whence the specific name). The rosy-purple flowers are produced on thickly covered, large, pyramidal racemes.—*Bot. Mag.* 4150.

### GESNERIACEÆ. — *Didynamia Angiospermia*.

*Gesneria Schiedeana*. This is another lovely addition to the many beautiful Gesnerias now cultivated in our stoves; it is remarkable for its richly-coloured blossoms, clothed with long shaggy hairs; their colour is a bright-golden scarlet; the limb variegated with red and yellow; the red arranged in broken lines. It is a native of Mexico, whence it was sent to Woburn, where it flowered in November, 1844. — *Bot. Mag.* 4152.

### SCROPHULARINEÆ. — *Diandria Monogynia*.

*Calceolaria floribunda*. Our gardens abound in *Calceolariae* from Chili and extra-tropical South America; but very few are known alive in this country from the tropical regions of the New World. The present handsome species is from the environs of Quito, where it was gathered by Mr. Lobb. It flowered in Mr. Veitch's establishment at Exeter in 1843. Although from within the tropics, and almost under the line, yet, the city itself of Quito being at an elevation of 11,000 feet above the level of the sea, this will probably prove a suitable plant for the greenhouse, and perhaps may flourish in the open air in the summer months. The flowers are globular, of a medium size, and bright yellow, resembling those of the old *C. integrifolia*. — *Bot. Mag.* 4154.

ACANTHACEÆ. — *Didynamia Angiospermia*.

*Whitfieldia lateritia*. This plant is a very desirable inmate of the stove, forming a small bushy shrub, with spreading branches and copious evergreen foliage; the branches terminated by racemes of flowers of a rather large size, of which the calyx and corolla, and often large bracteas, are of one uniform brick-red colour. It is one of the many novelties brought home to Lord Derby from the interior of Sierra Leone. — *Bot. Mag.* 4155.

LILIACEÆ. — *Hexandria Monogynia*.

*Blandfordia marginata*. A native of Van Diemen's Land, where it is abundant, and is, we presume, the real *Atteris punicea* of Labillardiere. It produced flowers two or three years since in the Nursery of Messrs. Osborn & Co., of Fulham, and was then named *B. marginata* by the Dean of Manchester, in consequence of the roughness of the edges of its leaves. It is far handsomer than *B. grandiflora*, from which it differs in its flowers being deep copper colour instead of half red and half yellow, in its long leafy bracts, and in the shape of its blossoms, which form a nearly regular cone, instead of being contracted above the base, and then inflated in the upper division. — *Bot. Reg.* 18—45.

SOLANACEÆ. — *Pentandria Monogynia*.

*Iochroma tubulosa*. In the opinion of Mr. Bentham this plant, which was mentioned in the last volume of the Botanical Register under the name of *Habrothamnus cyaneus*, is better separated as a peculiar genus, to which two other species, also found by Mr. Hartweg in Equatorial America, must be added. "This new genus," writes Mr. Bentham, "differs from *Habrothamnus* in the aestivation of the corolla; and, as far as I can judge from a not quite ripe fruit, in the fruit and seed belonging to the tribe of true Solanæ, not to the Cestrineæ. Mr. Hartweg found this plant in the form of a shrub from four to six feet high, growing on the mountains of Zangana near Loxa. It flowered in the Garden of the Horticultural Society in August, 1844. The flowers are handsome, of a bluish purple tint, and are produced freely from July to October. — *Bot. Reg.* 20—45.

*Cestrum aurantiacum*. In general the species of this genus have small claim to beauty; their flowers being for the most part green or greenish, or at least of some dingy colour; their only recommendation has been their occasional sweetness. This plant is one with a strikingly gay aspect; its apricot or orange-coloured blossoms being quite clear, and of considerable size for a Cestrum. It is, in fact, a very beautiful greenhouse shrub, and perhaps not unsuited for turning into the open border during summer: its foliage, too, is dark green, shining, and abundant; and in winter it is rendered gay by an abundance of snow-white pear-shaped berries. Mr. Skinner presented the Horticultural Society with the seeds, which he had obtained from Chimalapa in Guatemala. It flowered in the Chiswick Garden in August, 1844. — *Bot. Reg.* 22—45.

LAMIACEÆ. — *Didynamia Gymnospermia*.

*Dysophylla stellata*. The starry Dysophyll is mentioned by botanists as inhabiting Malabar and Mysore. The specimen from which the figure was made flowered in the garden of the Right Hon. the Earl of Auckland in October last. It is a delicate little light green plant, looking something like a Bedstraw, but more erect, and bearing spikes of the prettiest little purple blossoms, which remind the observer of the spikes of a Mimosa, or some such plant. The long slender filaments are directed downwards, and

being covered with delicate hairs, produce the appearance of plumes of purple silk. There is no hope, we fear, of this delicate little thing existing in the open air of England; on the contrary, it must have a warm green-house all the year round. — *Bot. Reg.* 23—45.

**NYCTAGINACEÆ.** — *Octandria Monogynia.*

*Bugainvillæa spectabilis.* A climbing plant, brought from Peru in 1829, but which never bloomed in this country until the specimen at Chatsworth disclosed its singular and beautiful inflorescence about two years ago, and again in still greater profusion throughout the greater part of last summer.

The showiness of the flowers is entirely vested in the large rosy-purple coloured bracts, three of which encircle the true heath-like flowers. — *Pax. Mag. Bot.*

**ERICACEÆ.** — *Pentandria Monogynia.*

*Seedling Chinese Azaleas.* No. 1. *Exquisita.* 2. *Optima.* 3. *Broughtonii.* These are three very beautiful varieties in the possession of Messrs. Knight and Perry, nurserymen, of Chelsea. The first is an improvement on the well-known *A. ind. variegata*, the spots and edging being more distinctly defined. 2. Is a rich, deep, rose-colour variety. And 3. possesses an intense crimson-red tint, quite distinct from any other. Both of them have fine full-shaped flowers, and cannot fail to be favourites. — *Pax. Mag. Bot.*

**ORCHIDACEÆ.** — *Gynandria Monandria.*

*Aerides maculosum.* This comparatively scarce species was imported from Bombay two or three years since, and flowered last year both in the collection of C. Horsfall, Esq., of Liverpool, and that of Messrs. Rollisons, of Tooting. The plant is easily distinguished from other species by the manner in which its leaves are crowded together on the stem; its sepals and petals are full rose-colour spotted with crimson, and the lip possesses the richest tint imaginable of the latter colour. — *Pax. Mag. Bot.*

*Spathoglottis Fortuni.* One of the first plants which Mr. Fortune met with on the granitic mountains of Hong Kong was this pretty little Bletia-like plant. Like the Bletias it has thin plaited leaves, and fleshy tubers, or corms, which lie dormant for some months after the foliage has disappeared. The genus, indeed, differs from Bletia principally in having the middle lobe of the lip stalked, with some deep plates at its base, and in its anther having but two cells instead of eight. The flowers are entirely yellow, excepting the side lobes of the lip, which are spotted and blotched with crimson. — *Bot. Reg.* 19—45.

*Govenia utriculata.* Remarkable chiefly for the large transparent, bladdery sheath surrounding its scape and the lower part of the leaves, which seems destined to contain water for the nutriment of the plant. The flowers are small, greenish-white, borne on a loose erect spike. It is a native of Jamaica and Hispaniola. — *Bot. Mag.* 4151.

## TO CORRESPONDENTS.

**Tyro.** — Pepper of commerce is obtained from the *Piper nigrum*; it is a native of the East Indies, and is cultivated there much in the manner of our hops. There are above forty species of *Piper*, most of them succulent, herbaceous plants, furnished with large fleshy leaves; the flowers are, individually, very inconspicuous, the entire genus being usually regarded rather as a vegetable curiosity, than as ornamental plants; they may be grown readily in peat and loam; with a stove temperature.

**Subscriber.** — It is far less trouble to split off the new shoots of Chrysanthemums already rooted, than to strike cuttings of them, and the result is nearly equal; it is only necessary to stop them early, and allow them sufficient space, to ensure handsome plants.

**An Amateur.** — Fix a piece of glass horizontally over the pods of tulip seed, and you will have no difficulty in ripening them.

**X.** — The following are highly ornamental half-hardy annuals that should be grown to enliven the conservatory through the summer months: *Portulaca splendens*, *P. Thellusonii*, *Browallia elata*, *Humea elegans*, *Mesembrianthemum pyropaeum*, *Celosia cristata*, *Schizanthus Hookerii*, *S. pinnatus*, *Clintonia pulchella*, *Mimosa sensitiva*, together with Balsams in varieties.

**J. F.** — We do not see any thing remarkably fine among the Cinerarias sent.

**T. Z.** — Your seedling *Auricula* is rich in colour, but unfortunately deficient of "paste," as it is called; the white portion should have more substance, and be of equal width with the edging.

**O.** — Nos. 2 and 7 of your Cinerarias are decided acquisitions; they are large flowers of superior shape and brilliant colours; the quilled varieties are not to our taste; we are anxious rather to obtain broad petals than these narrow incurved ones.

## LITERARY NOTICES.

**THE GARDENER'S RECEIPT Book**, by W. JONES, Gardener to J. Lawrence, Esq., Beddington, Surrey. London: *R. Groombridge & Sons.* — This is a collection of above a hundred recipes for the destruction of insects and vermin injurious to the garden, and the preservation of other matters connected with it. The utility of such a book for reference and consultation at the moment when a remedy is required, is self-apparent; the value of it, of course, depending on the effectiveness of the recipe proposed: and here the author tells us, he has either personal experience, or that of his friends, as to the certainty of all contained in his book, though he very properly remarks that

in some instances a single application may be insufficient, when it should be repeated till the desired effect is produced, inattention to this being the frequent cause of disappointment. The style is clear and concise, just the manner in which such things should be written, and we recommend it to our amateur friends as likely to assist them in many difficulties.

ORCHIDACEOUS PLANTS.—Messrs. *Groombridge & Sons* will publish, early in May, Mr. Henshall's work on the Cultivation of Orchidaceous Plants.

J. C. OTTEY'S TRADE CATALOGUE for 1845.—We are often annoyed at the egregious blunders contained in the Catalogues which emanate from nurserymen of even considerable standing, and regret very much that so little attention is paid to this portion of their business. The one before us is however a pleasing exception, the typography is correct in, we may say, every particular, and the descriptions very accurate, we only wish they were extended to all the plants enumerated, as should be done in every case ; the trade list would then become a useful vehicle to convey to the purchaser an idea, beyond mere names, of what he is buying, and serve to direct his selections.

## FLORAL INTELLIGENCE.

### ROYAL SOUTH LONDON FLORICULTURAL SOCIETY.

THE first show for the season of this Society took place on Wednesday, April 23rd, at the Horns Tavern, Kennington. The number of productions was somewhat limited, though some especially fine plants were among them. We may enumerate particularly an immense plant of *Erica favoides*, from Messrs. Fairbairn, of Clapham, a nice *E. aristata major*, from Mr. Dickson, and a pretty specimen of *Acacia cordata*, from Mr. Wood, of Norwood. In the collection of Mr. Pawley, of Bromley, which obtained the Adelaide Cup, were superior specimens of *Erica vestita rosea*, *E. Hartnelli*, *E. perspicua*, *Euphorbia splendens*, a plant of *Pimelea spectabilis*, together with other Heaths and Azaleas, &c.; several of them, however, we think would have been far better at home for at least a fortnight

longer. Mr. Bruce's collection contained beautifully neat and compact plants, all of them well-flowered, of *Aphelexis sesamoides*, *Acacia diffusa*, *A. virgata*, *Azalea indica variegata*, *Erica grandinosa*, *fastigiata*, *lutescens*, and *Andromedifolia*, &c Mr. Hamp exhibited a third large collection, containing, among others, a beautiful plant of *Epacris grandiflora*, *Azalea indica alba*, *Roella formosa*, *Boronia pinnata*, &c.

Orchideæ were shown by Mr. Don, gardener to F. Cox, Esq., of Stockwell; they were, *Dendrobium macranthum*, a fine plant, *Trichopilia tortilis*, *Oncidium papilio*, *O. filipes*, *O. altissimum*, *O. lancifolium*, and *Epidendrum crassifolium*. A rich variety of *Oncidium luridum guttatum* was also present from Mr. Pawley, together with a large plant of *Epidendrum crassifolium*. Mr. Ivery, of Peckham, exhibited a large collection of *Cinerarias*; the best of them were, *Beauty of Wonham*, *Fanny Elssler*, *Criterion*, *Beauty of Syston*, *Red Rover*, and *Nosegay*. Among his seedlings we were particularly pleased with *Therese*, a fine circular flower, of a peculiar, rosy-tinted blue; *Nobilis*, white, tipped with pale pink, the best form we have yet seen; and *Desirable*, white, tipped with crimson, fine circular flowers.

The Auriculas were decidedly superior, and more numerous than, from the extremely adverse weather experienced at the beginning of the season, we had anticipated. Seedlings were exhibited by Mr. Dickson and Mr. Chapman. Dickson's *Sir R. Peel*, a grey edge, promises to be a useful flower, but owing to the unfavourable weather they have been subject to, a fair opportunity of judging them has not been afforded this season. Mr. Trahar's four, which obtained the Cup, were, *Conqueror of Europe*, grey; *Dickson's Wellington*, green; *Clegg's Crucifix*, white; and *Apollo*, self. The best pair, from Mr. Schröder were *Page's Champion*, green; and *Conqueror of Europe*, grey. The best six were *Gordon's Champion*, *Lancashire Hero*, *Moore's Violet*, *Cardinal Fleury*, *Page's Champion*, and *Highland Boy*, from Mr. Trahar. In the nurserymen's class, Mr. Dickson exhibited the best four — *Bury's Lord Primate*, self; *Conqueror*, grey; *Page's Champion*, green; and *Taylor's Glory*, white; and the best pair, *Page's Champion*, and *Maclean's Unique*, grey, a new and very beautiful flower. A collection of fourteen sorts, also from the same, were present. Pansies were shown by Mr. May, of Edmonton, and Mr. Hart, of Guildford, and two seedling Polyanthus, by J. P. Burnard, Esq.

The following is a list of the prizes awarded.

For the best collection of miscellaneous plants:—

The Adelaide Cup - - - Mr. Pawley, Bromley.

Class I. Private Growers.

Best pair of auriculas, Middle,	Silver Medal	-	J. H. Schröder, Esq.
Second best, Small,	do.	-	W. Trahar, Esq.
Third,	Second small, do.	-	W. Sandilands, Esq.
Best six,	Middle,	do.	-
Second do.	Small,	do.	-
Best collection of 18 plants,	Large,	do.	-
Second do.	Middle,	do.	-
			Mr. Bruce.
			Mr. Hamp.

Class II. Nurserymen.

Best pair of auriculas, Small,	Silver Medal	-	Mr. Dickson.
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Open to both Classes.

Best specimen plant, Small,	Silver Medal	-	-	Messrs. Fairbairn.
Second do.	do.	-	-	Mr. Dickson
Twelve cinerarias, Third do.	do.	-	-	Mr. Ivery.

Extra Prizes.

Best four auriculas, Silver Cup, presented by Mr. Jas.				
Dickson - - - - -				W. Trahar, Esq.
Ditto, Three Guineas, presented by Messrs. Chapman and Trahar - - - - -				Mr. Jas. Dixon.
Collection of Alpines, Third small, Silver Medal	-	-	-	Mr. Wood.
For 6 orchidaceous plants, Small,	do.	-	-	Mr. Don.
Best specimen, do.	Third,	do.	-	Mr. Don.
Collection of auriculas, Small,	do.	-	-	Mr. Dickson.
Seedling auriculas, 2nd Class Certificates, three	-	-	-	Mr. Dickson.
Ditto, ditto, one - - - - -				Mr. Chapman.
Heartsease, Third small, Silver Medal	-	-	-	Mr. Hart.
Cucumbers, ditto, do.	-	-	-	Mr. Cuthill.
Seedling polyanthus, Certificate	-	-	-	Mr. Burnard.

CALENDAR FOR MAY.

To those amateurs whose taste may lead them so far in the study of our native plants as to collect and arrange specimens, the natural arrangement is strongly recommended, both on ac-

count of the high interest it excites, and the extensive knowledge it imparts ; and the present month is particularly adapted for the commencement of the study of that system from the number of species of several of the most extensive of the natural orders of our indigenous Flora which may be found in flower. Thus in *Ranunculaceæ* fourteen species are to be sought for, some of them very local ; in *Cruciferæ*, twenty-one species ; in *Caryophylleæ*, thirteen species ; and in *Leguminaceæ*, seventeen species : whilst in orders the bulk of whose species flower later in the season, we have in *Compositæ*, five ; in *Scrophularineæ*, six ; among *Carex*, at least, twenty-six species may be found ; and of *Gramineæ* about a dozen. Decidedly the most interesting order of British plants is *Orchidaceæ*, and about nine species flower during this month. Altogether about 250 plants are to be added to the list this month, and if only four or six species of the larger natural orders are arranged and studied, the amount of really valuable knowledge attained will soon far exceed all that can be gained from the Linnæan system, without detracting in the least from the undoubted benefits conferred on science by the immortal Swede. Nor is this all that will reward the study of our native plants ; for there are, no doubt, many nooks and corners of the British Isles that will yet yield absolutely *new* species to the close observer. Few would have expected a decidedly new plant in such a locality as Primrose Hill, and yet an undoubted new grass was found abundantly in that neighbourhood last year. The parish of Tottenham also has furnished one or two new, or very rare plants, during the same time. Nor is this all : Mr. Borrer, Mr. Babbington, the Rev. Messrs. Bloomfield and Coltman, and others, have added new species to the catalogue very recently, and yet, no doubt, much remains to be added by further investigation.

In the flower-garden the preparation for bedding out the summer stock should be looked to, commencing with the hardest, and keeping the tender things back until near the middle of the month. Few gardeners think of turning out Verbenas, Pelargoniums, &c., until near that time, many of them having a lively recollection of a frost, on or about the 10th of May some ten or more years ago, which did immense damage to the flower-garden. Continue to propagate bedding plants ; few have much to spare in that way this season.

Among greenhouse plants preparations should be made for

placing the most of them out of doors, in sheltered situations, for the summer, especially where vines are grown in the same house, as the two sets of plants can hardly have justice done to them under the same roof. Whilst hard-wooded plants are kept in, a plentiful supply of air and regular moisture must be carefully maintained.

In the stove a moister atmosphere, with more air, increased temperature, and shading, must be attended to. *Achimenes*, *Gloxinias*, &c., should, some of them, be advancing; but a few may still be retarded for a later bloom. Proceed with shifting plants whenever they require it.

**FLORISTS' FLOWERS.** As soon as the bloom is off the *Auriculas*, they should be removed to the shelter of a north wall, there to remain out of reach of the sun throughout the summer months, receiving frequent attention as to watering, cleaning, &c. Finish potting *Picotees* and *Carnations* as speedily as possible; a slight shading for a day or two after this operation will be beneficial, to be followed by an abundance of air, until the flowers begin to expand: a great deal of trouble may be expected shortly in the extirpation of green flies; it must however be strenuously persisted with. *Tulips* are "coming well" this season; the awning must be drawn over them shortly, and much attention paid to the weather about the time of their opening, or the visitation of a slight hail-storm will destroy the whole year's labours. A layer of rotten cow-dung or decomposed leaves, placed on the *Ranunculus* beds, will preserve moisture to the roots and the beds from cracking. Plant out *Dahlias* and *Pansies*, and continue propagating scarce sorts. Sticks, mats for tieing, shades, and all other requisites, should be in constant readiness, as it often happens that the immediate appliance of either, or all, is of the very first consequence.

P.





PASSIFLORA SCHRÖDERIANA

THE  
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ON THE PASSIFLORA.

WITH AN ENGRAVING OF *P. SCHRÖDERIANA*.

IT will probably be in the recollection of our earlier subscribers, that in p. 111. Vol. III., when speaking of the Passion-flower, we took occasion to recommend the genus to the attention of those interested in the production of hybrids, as being easily operated on, and likely to yield a more than adequate return. What we then advised we took the first opportunity that offered, which was in the second season following, to put in practice, and now the pleasure is ours of showing the result. The accompanying figure is that of a seedling obtained from *P. alata*, impregnated with pollen from *P. Loudonii*; and the object we proposed when effecting the cross is most fully attained, the hybrid exhibiting an equi-distant affinity to both the species mentioned. In general appearance the resulting plant possesses much of the character of the former; its leaves are of the same entire form, and the flowers, besides retaining the general outline of those of the seed-bearing parent, are produced on short axillary peduncles, as are those of *alata*; while on the other hand, its relation to the contra-parent is evident in the rounded stems of the plant, its more compact manner of growing, and in the vivid tints of the bracts and corolla, thus amalgamating, as it were, the distinguishing features of either parent, and fortunately possessing an advantage over both in its copious habit of flowering. The blooms from which our drawing was taken

expanded when the plant was quite small, being not more than four feet in height and but five or six months old. It produced in the autumn of the year in which the seed was sown a multitude of flower-buds, which, however, by an infortuitous circumstance, were prevented opening ; should this trait prove to be permanent, it will form a desirable and distinguishing character of the plant. It has hitherto been grown in a pot and attached to a cylindrical wire trellis, nor, from its very dwarf confined manner of growing, does it appear likely to require more space either for its roots or branches. A station in the stove, for which it is often difficult to provide suitable occupants, seems to be exactly the place for it, namely, the bottoms of pillars, the upper portions of which it is always easy to fill, from the natural affinity which all plants bear to the light, in their eagerness to reach which, and the warmer atmosphere of the top of the house, they frequently scramble upwards, leaving their stems destitute not only of flowers, but even of foliage. In such situations we fancy the present plant will be found useful.

We are proud of this opportunity to acknowledge some of the kindness we have received from the gentleman after whom it is named, J. H. Schröder, Esq., of Stratford, a most liberal and judicious patron of the science.

In the continued hybridising of this genus, the most promising and important line of operations will be found in the obtaining of hardy varieties for the embellishment of out-door scenery. *P. cærulea* is the only one to be seen cultivated in the open air, and this, though delicately beautiful, does not possess sufficient colour to render it an object of much interest ; could the bright glowing tints of some of our stove species be inducted on the robust hardy character of *cærulea*, no better climber need be wished. The great obstacle to this most desirable consummation is the difficulty with which the species named can be induced to form and ripen its seed when exposed to the chilling influence of our usual autumnal weather ; still it does sometimes produce seed, and probably, was attention paid to the setting of the earlier flowers, the barrenness complained of would be removed. It is quite evident, to obtain new varieties sufficiently hardy for the proposed purpose, *cærulea* must be made the maternal parent, for it is well known that if hybrids are not a degree more tender than the plant from which the seed is obtained, they are, with but few exceptions, quite as impatient

of cold ; and therefore to select even a greenhouse kind because it is more easily induced to bear fruit, would be to annul the object : nor would it be reasonable to expect anything quite hardy, even with *cærulea* employed as we propose, if a stove species be included in the cross. It is true in the present condition of the genus the choice of suitable kinds is very limited, yet if out-of-door varieties are most desirable, it will be better to confine the operation to the most promising that offer than to indulge in expectations that are not likely to be realised. *P. cærulea*, with the beautiful *P. cæruleo-racemosa*, itself a hybrid, seems to hold out the best chance of obtaining some new form with the required hardiness, though we think the species of *Tacsonia* lately introduced from Mexico may be employed to much advantage, for some of them have beautiful bright colours that our greenhouse Passion-flowers are altogether destitute of. The two genera are so nearly allied that there appears every probability of their ready hybridising, and the former coming from the elevated districts of the country is already estimated as half-hardy, and therefore presents every prospect of success.

There are one or two matters of some consequence in the raising of seedling Passion-flowers, which we will point out.

In the first place, it is all-important that the seed be duly and thoroughly ripened, to assist and further which the fruit should be allowed to hang as long as possible without injury from frosts; slight ones will not cause any material damage, and, of course, when thoroughly ripe it will fall from the plant ; then the seed should be removed from the pulp which surrounds it, cleaned, wrapped in paper, and put away safely in a rather warm, dry situation until the return of spring. Some of that which we obtained was sown immediately after gathering, and the whole of it so treated refused to vegetate, from being, we suppose, in an immature state ; the other portion, which was preserved till spring, came up very fairly. Our seed was sown in light rich earth, and the pot plunged into a brisk hot bed, where in about a fortnight the plants began to make their appearance above the soil ; these, as soon as they were large enough to handle, were removed singly into small pots, and continued in the frame until too large for it to contain them ; a cool stove then received them, where they remained until the next winter. Even with seedling plants that we expected to prove hardy, it will be most

advisable to employ artificial heat to hasten their early development, and we should recommend the continuance of some protection until duplicates are obtained.—EDITOR.

### ON BEDDING OUT PLANTS.

AT the present busy period, when almost every one is engaged in making preparation for the embellishment of the flower garden, no apology can be necessary for the appearance of the following hints, intended as an assistance to the tyro in gardening, and which may probably serve to remind the more experienced operator of some useful plant that may have been overlooked. It may be in places where a large quantity of these plants are employed, that a considerable number are already in their respective situations, and it is quite as likely the majority of small gardens have yet to be filled; to these the present remarks are especially directed.

The first point, and it is one of much consequence in the operation of "turning out," is to have the plants duly prepared for the great change they will thus experience. The greater part of those usually employed for the purpose are what is termed half-hardy, that is, capable of bearing exposure to our summer weather, but impatient, or altogether unable to endure the effects of cold and adverse seasons; and these plants, in almost all cases, are introduced to heat, and induced to grow as freely as possible through the early months of spring for the purposes of propagation. If then they are not properly and by degrees inured to the open air, so as to become well indurated before their final remove, how very great must be the check they receive, and equally great the disappointment of the cultivator, who sees his plants standing as he placed them, without exhibiting the least advance, or if there is any perceivable difference it is of the retrograde character, while the season is passing away that they should be unfolding their beauties in, and he has not a sign of flowers; then sometimes the weather is blamed, or there has been a blight, but depend on it the first cause of the failure lies in the unprepared state of the plants when first exposed to the full influence of the air.

Another matter requiring much and constant attention, is to preserve them in a growing state after they are out, for the difference in affecting circumstances is sufficient to suspend action even in the best of plants, without care be taken to counteract the bad effects. The legitimate remedies are a due supply of water and shading; these *must* be given whenever requisite.

In the act of planting out some tact is necessary. The soil, not only just where the plant is to stand, but for a space all round it, should be well pulverised; this allows the free percolation of both water and air, an advantage the roots soon avail themselves of, as evinced by their rapid protrusion throughout the loosened mass. Then again care should be had that they do not receive injury from the violence of winds, heavy rains, &c.; sticks or pegs, as the case may require, being regularly supplied as soon as the want of them becomes obvious. A quantity of climbing plants in the early stages of their growth would furnish nearly constant employment for a person to attend to the nailing, tieing, and proper direction of their shoots; yet without this attention what entangled slovenly-looking objects they speedily become.

It is not the intention of this paper to enter on the subject of arrangement, or to offer any extended remarks on what are suitable or unsuitable plants, but the following are a few really useful ones for all the purposes of the flower-gardener:—

#### HERBACEOUS PLANTS.

##### *Half-hardy.*

*Anagallis Brewerii.* Fine ultra-marine blue; very large.

*rosea elegans.* Large, rose colour.

*Gaillardia picta.* Orange rays, red centre; an old but useful plant.

*Oenothera grandiflora.* Large, yellow; very showy.

*Lobelia Erinus grandiflorus.* Deep blue; suitable for masses.

*Chænostoma polyantha.* Pale lilac, with yellow eye; may be used for the same purpose as *Anagallis*.

*Hardy.*

*Aconitum virginicum.* Blue and white.  
*Delphinium Barlowii.* Splendid blue; an universal favourite.  
*Dracocephalum speciosum.* Producing fine spikes of pink flowers.  
*Geum coccineum splendens.* Crimson; handsome.  
*Œnothera macrocarpa.* Very fine large yellow flower.  
*Penstemon carnatus.* Deep rose colour.  
*atropurpureus.* An amazing bloomer; rich purple.  
*Matricaria floribunda.* Double white; pretty.  
*Phlox omniflora magna.* Splendid white; very large.  
*Broughtonii.* Fine rose, dark eye.  
*Princess Marianne.* Lilac, and white stripe.  
*Van Houttii.* Rose colour and white stripe.

All of these are exceedingly beautiful, as are the following

## VERBENAS.

*Atrosanguinea* (Chandler's). Large velvety red, yellow eye.  
*Azorea grandiflora* (Stewart's). Pale blue.  
*Barkerii.* The finest scarlet yet out.  
*Beauty* (Girling's). Cherry colour, very bright.  
*Boule de feu* (Girling's). Vivid scarlet.  
*Enchantress* (Alexander's). Fine rosy pink.  
*Emma* (Walton's). Deep purple blue.  
*Fowliana.* Fine dark lilac.  
*Fortune Teller* (Girling's). Blush pink.  
*Giant* (Girling's). Very large; lilac.  
*Howardii.* Flesh colour.  
*Louis Philippe* (Fairbairn's). Extra fine dark velvety purple; very large; altogether a beauty.  
*Princess Royal* (Youell's). Pure white.  
*Purple Queen* (Ivery's). Fine purple.  
*Parksii.* Deep rose.  
*Queen* (Ivery's). White, changing to a pale flesh colour.  
*Renown* (Girling's). Bright ruby.  
*Superb* (Mortlock's). Shaded pink.

## IMPROVEMENT OF WILD FLOWERS.

I WAS much pleased with an article on British Orchideæ, contributed by a correspondent a few months since ; and an anxious desire to extend the subject, and if possible excite some interest on the question, is the *animus* which directs me on the present occasion. We have abundance of proof of what may be done, by assiduous perseverance and properly directed skill, in the case of the several portions of the vegetable kingdom denominated "Florists' flowers;" then why may not the same amount (or less) of attention produce like results in that portion indigenous to our country. It seems (to me at least) to be almost a reproach on our boasted "love of our father land," thus to neglect its native beauties ; and I, as an individual concerned in the progressive improvement of all that concerns it, am determined henceforth to use my strongest exertions to effect something in the way proposed ; and as there may be others actuated by a similar desire, I will briefly mention a few of our wild flowers that, in my estimation, are likely to be found manageable subjects, that will gratefully return compensation for the attention given. It is not necessary to travel far for subjects, or to look into a catalogue for outlandish names ; they meet us at every turn, and are visible on nearly every bank or the margin of every stream. Our Snapdragons are already yielding to the influence of cultivation, as is shown by the figures given in the Journal last March : and why should not the Wallflowers exhibit the same propensity ; a purely white one would be most desirable, and to this colour they seem naturally inclined. The beautiful little *Campanula rotundifolia*, an inhabitant of nearly all commons or waste lands, is another promising plant, that has already with me attained at least double its usual stature, both with respect to its altitude and the size of its flowers ; and then the lovely little eye-bright, *Euphrasia officinalis*, what a charming object it would present if somewhat larger ! The Rose Campion, Rest Harrow, Yarrow, Foxglove, some of the Asphodels, the Wild Thyme, Mullein, Periwinkle, Fumitory, and a variety of others may be enumerated as worthy of a trial, to say nothing of our Heaths. Would that we could impart the hardiness of our native species to plants with the splendid inflorescence of the well-known exotic kinds ! However, any direction to be given to

the cultivated plant must be determined by the result of the first season's experience, and any perceptible change should be encouraged until it can be decided what is most likely to be profitable.

BRITANNICUS.

### GLOSSARY OF TERMS USED IN BOTANICAL DESCRIPTIONS.

A DIFFICULTY which often besets the English reader has been pointed out to us, as militating much against the enjoyment of botanical reading, and the utter impossibility of understanding the subject in which such complicated out-of-the-way terms are so frequently used; we therefore propose to remedy the unavoidable evil by the introduction of a list of terms and their significations, in carrying out which we shall confine ourselves in the first instance to such as are of more ordinary occurrence, reserving the abstruse and such as appear indefinite until another series, should it hereafter be called for.

A (from the Greek  $\alpha$ ). In composition signifies "without;" as *apetalous*, without petals; *aphyllous*, without leaves. In the case of its joining a vowel it is softened into *an*; thus, *ananthous*, without flowers.

ABBREVIATE. Used to indicate that an organ or part of one is shorter than another.

ABERRANT. Wandering from the natural way, applied in Natural History when the character of certain species or genera differs from those of their neighbours.

ABNORMAL. Of similar meaning to the above, applied usually when the difference exists among more closely allied species.

ABORTION. An imperfect developement.

ABORTIENT. Abortive.

ABRADED. Having the appearance of being rubbed or worn off.

ABRUPT. A sudden termination, an imperfect end.

ABRUPTLY PINNATE. When a pinnate leaf terminates in a pair instead of an odd leaflet.

ABSORPTION. As in ordinary composition.

**ABSTERGENT.** Possessing a cleansing quality.

**ACALYCALIS.** Applied when the stamens contract no adhesion with the calyx.

**ACALYCINUS.** Without a calyx.

**ACANTHOCARPUS.** Fruit having spines.

**ACANTHOCLADUS.** Branches having spines.

**ACANTHOPHORUS.** Bearing spines, or stout bristles.

**ACANTHOPODIUS.** Footstalks of the leaf-bearing spines.

**ACAULIS.** Without stems; applied to herbaceous plants.

**ACCESSORY.** An addition to the usual number or condition of organs, or their parts.

**ACCISUS.** An abrupt termination; appearing to have been cut off.

**ACCLIMATIZE.** To render a plant capable of enduring without protection the changes of a climate to which it is not indigenous.

**ACCRETION.** The growing of contiguous parts or organs together in the manner of a graft.

**ACEROSE.** Needle pointed; applied to the leaves of plants resembling those of the Coniferae.

**ACESCENT.** Sour, acid.

**ACETARIUS.** Anything suitable for a salad.

**ACHILAMYDEOUS.** Literally, without a coat; when flowers are destitute of a distinct perianth, as in the willows.

**ACICULAR.** Pointed, needle-shaped.

**ACINACIFORM.** Scimitar-shaped, curved.

**ACINI.** Employed to signify the granules containing hard seeds, which compose pulpy berries, as in the strawberry, &c.

**ACIPIHYLLUS.** A narrow sharp-pointed leaf.

**ACOTYLEDON.** Applied to plants which bear no true seeds, but are reproduced by sporules, as in Cryptogamia.

**ACRONYCHIUS.** Crooked, or bent inwards like the claw of an animal.

**ACULEATE.** Sharp-pointed, furnished with prickles.

**ACULEI.** Prickles, distinguished from spines by their falling off when old, which the latter do not.

**ACUMINATE.** Extended to a long taper point.

**ACUMINOSE.** Nearly acuminate.

**ADENOPHOROUS.** Studded with glandular points.

**ADHERENCE.** The union of parts, originally distinct.

**ADISCALIS.** When the stamens, in the absence of a fleshy disc, proceed directly from the thalamus.

**ADNASCENS.** A term descriptive of a young bulb.

**ADNATE.** Adhering the whole length. Anthers are adnate when attached by their whole length to the filament.

**ADNATUM.** Same as Adnascens.

**ADVENTITIOUS.** Applied to an organ when misplaced, or out of its ordinary position; thus the small bulbs sometimes observed on the flower stems of lilies are adventitious.

**ADVERSE.** When one part is placed in an opposite position to another.

**ÆQUALIS, ÆQUANS.** Equal, of the same proportions.

**ÆRUGINOUS.** Green, the colour of verdigris.

**AEROPHYTE.** A plant which grows entirely above the surface of the earth or water; an air plant.

**ÆSTIVATION.** The manner in which the parts of the perianth are disposed, the principal forms of which are the valvular, twisted, induplicate, alternate, quincunxial, vexillary, cochleate, imbricate, convolute, calyculate, and plicate.

**AFFINITY.** Differs from Analogy in so far that the resemblance which occasions it must depend on some important organ, while Analogy is more superficial or dependent on only a trivial property.

**AGGLOMERATED.** Gathered into a dense head or mass, as the flowers of a Scabious.

**AGGREGATE.** Nearly the same as Agglomerate, usually applied to a dense kind of inflorescence.

**AGRESTIS.** A term significant of rural vegetation, wild flowers.

**AIOPHYLLUS.** Implying an evergreen character.

**AKENIUM.** A nut, a hard pericarpium, containing a single loose seed.

**ALA.** A wing, or thin membrane.

**ALATA, ALATUS.** Winged.

**ALBESCENT.** Hoary, having a whitish tinge.

**ALBUMEN.** A substance which affords nourishment to the embryo plant, and therefore constitutes the greater part of many seeds; it is usually of an oily farinaceous consistency.

**ALBURNUM.** The layers of soft new wood next the bark of exogenous trees.

(To be continued.)

## HORTICULTURAL ESSAYS,

*By the Members of the Regent's Park Gardeners' Society.*

## ON THE CULTURE AND FORCING OF THE LILY OF THE VALLEY.

By Mr. D. WATT.

THE *Convallaria majalis*, or Lily of the Valley, is an elegant and delicate-scented plant, which has long been held a favourite, though from the circumstance of its not being a native of hot countries, it is not likely to be the Lily of the Valley mentioned by Solomon. Notwithstanding the fragrance of the flowers when fresh, they have when dried a narcotic odour, and if reduced to powder will excite sneezing. An extract prepared from the flowers, or from the roots, partakes of the bitterness as well as of the purgative properties of aloes. A beautiful and durable green colour may be prepared from the leaves with lime.

This little plant is very common in the woods about Woburn in Bedfordshire, and from whence the London markets are supplied with the flowers; it also grows in great abundance in Essex, and in some of the southern counties of Scotland. In Essex it is to be found to the extent of several acres in one place, on a soil of a very close loamy texture, mixed with clay. The situations which it seems generally to inhabit are somewhat marshy; in such places the plant will grow and thrive amazingly, producing heads of pure white flowers full six inches long.

They should be planted in a situation and soil similar to that I have just described. Before planting, dig over and well break the ground about nine inches deep, then plant the roots, about four inches apart, all over the surface of the ground, giving them a gentle press down with the thumb and finger, and then cover them about four inches thick with the same sort of soil. On forming new plantations of this plant, I select all the flowering buds from my stock of roots, which I plant by themselves, but in the same way as I do the others. If equal quantities of each

can be had, there will be equal quantities of flowers for two or three successive seasons, after which they should be all taken up, the roots divided, and replanted in the same way. If neatness is desired, as well as a stock of good plants producing a plentiful supply of flowers in their season, the above is the easiest and most certain method that I am acquainted with. It may be well to state, that at the time of replanting, it will be requisite to leave a sufficient quantity undisturbed for the purpose of lifting for forcing during the winter months. It is rather surprising that this plant has not been cultivated with better success; the reason of this, in my opinion, is that it has been killed by too good treatment.

From the early period at which the Lily of the Valley naturally flowers, few plants are more eligible for early forcing. As I have been rather successful, both as regards general cultivation and winter forcing, I will now endeavour to give a brief outline of the practice I have pursued in forcing. I pot them in 32-sized pots, filled to within three and a half inches of the rim with rich loam, upon which the roots are closely placed, and then covered about two inches in thickness with equal parts of leaf mould and sand; they are then well watered, so as to settle the mould about the roots. I then place them on a shelf near the glass in a moist stove or forcing-house, the temperature of which may range from 65° to 75°, and take care that the soil does not become dry. When they are so far advanced, the plants show their heads of flowers, I remove them into a warm greenhouse, still placing them near the glass, until as they advance in growth they are withdrawn by degrees into a shaded part of the house, from whence they are removed to the drawingroom as required. When I remove one lot of plants from the forcing-house, their places are immediately filled with others, which are similarly treated, and thus an ample succession will be kept up. Care and attention are requisite in lifting and selecting the plants for forcing; they require a minute examination to distinguish those that will flower from those that will not, the only difference being that the buds of the former are more round and short than those of the latter. I cut off the flowering buds, with as many roots to them as possible, and after I have obtained a sufficient number the rest are carefully replanted, taking care that none of them are lost, for those which will not flower one season may do so the next.

It may be considered presumptuous of me to offer these remarks on one of our native plants, but under the above method of cultivation I have always met with success, and as they may not be without their use it demands some degree of attention from every gardener.

## CULTURE OF MUSHROOMS.

By Mr. G. SWANSON.

THE following observations are confined to the forcing of the mushroom, in the practice of which I may boast some experience; and am certain, if the following directions are put in practice, and strictly adhered to, they will be found to be effectual. The common field mushroom (*Agaricus campestris*) is considered the best for all kitchen purposes. I will quote the following description from "Rhind's Vegetable Kingdom," which says it is the only species of mushroom cultivated as an article of food in this country; and as some other poisonous kinds very nearly resemble it, a minute description may not be without its use:—The stem of the edible mushroom is short, solid, and white, marked a little below the cup with a prominent ring, the remains of the curtain which covers the gills in their early stage. The cup is at first white, regularly convex, and a little turned in at the edge. As it advances in growth, the surface becomes brown, scaly, and flattened. The flesh is white, firm, and solid. The gills are loose, reaching to the stern on all sides, but not touching it; when young, these are of a pinky red, but change to a livid colour about the same time that the cup alters its form, and the upper surface also changes colour. The latter circumstances distinguish it in this stage from the dark-gilled toadstool, with which it might otherwise be confounded.

Having thus given a short description of the mushroom, the *next* and most important consideration to us all is the manner in which to make or procure the spawn.

The spawn is to be found in decayed dryish rotten dung; such as old hot beds, layers of decayed horse dung, dungy compost heaps, horse mill tracks, and dungy horse rides in stable

yards, &c. It is of whitish fibrous nature, interspersed through the dung, and produced probably from the seed of former mushrooms; this seed, however, if it really does exist, is very minute (probably as the finest dust), and is prodigiously numerous, and most widely disseminated: it is scattered over various substances, so as to be always ready to germinate when the peculiar circumstances essential to its growth may occur; and then, in the exercise of its vegetative function, produces the substance called spawn. A quantity of the spawny lumps containing the spawn should be procured, and laid up in store in some dry airy situation, for it will keep for some time. The making of artificial spawn is another matter of importance to the grower. The following method I have practised with good success:—Take any quantity of horse's droppings, fresh from the stable, and add to it about one-third of cow's dung, and a small portion of light sandy earth; mix these together by adding such a portion of water as will allow the whole to be formed into a thick mortar-like substance: this being done, take a mould, about the size of a common building brick, and fill it with the prepared substance: remove the bricks to a dry airy place, where they will dry quickly; and when about half dry, pierce a small hole in the centre of each, and place a small piece of spawn in each hole; move them frequently to promote their drying. When dry, take a quantity of well fermented dung, and spread a layer of it a foot thick upon this dung. Pile up the spawn bricks in regular order, keeping the pierced sides uppermost to prevent the pieces of spawn from falling out, and building the pile as open as possible, terminating in a point. After this is done, take a little fermented dung, and cover the pile with it so as to impart a gentle heat throughout the whole. The spawn will soon run through the bricks, and when this is observed, let them be stored as already stated.

The spawn being thus provided, the next consideration is the preparation of the dung, and the making of the bed.

The bed should be made with fresh warm stable dung, mixed with, at least, one-fourth of vegetable mould from decayed tree leaves, or with the same quantity of well-rotted cow dung. Then throw it up into a heap, well mixing it in the process, and let it lay for a week or fortnight to let the burning-steam and heat pass off, so that the whole may become mellow, and of an

equal temperature ; in which state it is in readiness for making the bed.

In making the bed, either on the shelves, or floor of the mushroom house, take some long litter from the dung heap, and lay at the bottom ; then let the prepared dung be put on in layers, to the depth of two feet, being well beaten down, as the process goes on. When the bed is made, it is proper to have two, or more, *trying sticks*, thrust down in different parts to draw up, occasionally, in order to ascertain the heat. After the vehement heat has subsided, and the bed is lowered to a very moderate or mild heat, then, and not before, put in the spawn, previously breaking the large lumps into moderately small pieces, and planting it into the dung at one foot apart. Then take the earth of previously made exhausted beds, and scatter it all over the surface ; it will answer two purposes. When the spawn begins to run, cover the bed with strong rich earth, mixed with a little cow dung, and after it is finally earthed over, let the surface be smoothed, and well beaten with the back of a spade ; two inches of earth is quite sufficient.

In making mushroom beds out of doors, take a sufficient quantity of dung prepared as already directed, and with it make the bed in the form of a ridge, four or five feet wide at bottom, and three or four feet high, gradually narrowed to the top. The process of making the bed is the same as that described in the mushroom-house. It should be made in a dry sheltered situation, and on level ground, in preference to making the lower part in a trench, in order to have the opportunity of spawning it quite to the bottom, and also that water may not settle in that part to check the heat ; mark out the proper width and intended length, and then commencing at the bottom part by a layer of prepared dung, as before observed. Begin at one end, and work up the sides equally in a gradually sloping manner, and forming the ends nearly in the same proportion. Observe to put in the spawn as before directed, for the heat should be only sufficient to set the spawn in vegetative motion, so as to extend its fibres into the dung and earth ; and this degree of heat should continue for some considerable time in a moderate growing manner, to promote and forward the knotting of the mushrooms. When the bed is spawned, and earthed over, it may be directly covered with a good thickness of dry

straw, and an external coating of mats, pegged down at each side of the bed.

As the mushroom is subject to the attacks of insects, during the summer months, it is necessary here to add, that the only means of keeping away the enemy is by putting a layer of coal-ashes beneath the bed, and mixing a little soot with the covering of earth. In watering, make holes one foot apart in the bed, and fill each hole as the bed becomes dry.

To keep up a succession throughout the season, take this as a rule:—As soon as mushrooms appear on one bed, make the preparations for another. The temperature of the mushroom-house may be kept from 40° to 60°. In a month or six weeks after spawning, if the bed works kindly, it will produce mushrooms; and if kept in good order, it will continue in bearing for several months.

In examining the beds out of doors, or when gathering the produce, turn off the straw covering very carefully; and as the advancing mushrooms will generally appear in several different stages of growth, gather those only that are of a proper age, that is, before they become large and expanded, and generally while they remain compact and firm; detach them by a gentle twist close to the root, but do not cut them out, or leave the stumps in the bed, for they bring on the rot, and become maggoty and infectious to the succeeding young crop, which are advancing in successional growth. Always, as soon as the gathering is finished, cover the bed again directly with the straw litter, especially in cold, wet weather; at any rate it should never remain long uncovered; but only occasionally on dry warm days. If the earth has, by any means, become very damp, the covering may remain off two or three hours, sufficient to dry the surface; but it should be covered again as soon as possible.

The above being the general practical directions for making and spawning mushroom beds, I shall only add some essential particulars very necessary to be observed. As the spawn of the mushroom is of a peculiarly delicate nature, so much so that either too violent a degree of heat in the bed, or excessive wet and cold, would inevitably destroy its vegetative powers, it is necessary to make the bed in the form of a ridge, which experience has proved to be the most eligible, in order to have it the more readily attain and maintain the requisite mild

degree of heat; and also, by its sloping form, the more effectually to shoot off or discharge any redundancy of moisture, and to preserve the surface moderately dry. A thick covering of straw is also necessary, both to assist in preserving the gentle heat or warmth, and to defend the bed from excessive rains, as well as to exclude the external cold and damp.

GEORGE SWANSON.

*Cambridge House Garden, Twickenham,*  
Oct. 3, 1844.

## LIST OF NEW PLANTS.

### ORCHIDÆ.—*Gynandria Monandria.*

*Warrea cyanea.* This plant is remarkable for the intense porcelain blue colour of its lip, to which it is not easy to find a parallel in the order; for pure blue is scarcely known among Orchidæ. The plant has quite the habit of *W. tricolor*, but is very much smaller in all its parts. Its most distinctive character is found in the form of the lip, which has a distinct point, and five ribs, not three, near the base. Messrs. Loddiges imported it from Columbia in 1843. — *Bot. Reg.* 28-45.

*Stanhopea Bucephalus.* This is one of the rarest and finest of Stanhopeas, in some measure resembling *S. oculata*, especially in the long, narrow hypochil. Its flowers are deliciously scented, and their bright golden colour produces a very rich effect. At first sight it might be mistaken for a variety of *S. oculata*, but the shortness of its ovary is a decisive mark of distinction. The effect of this shortness is to make the inflorescence of *S. Bucephalus* very narrow, while in *S. oculata* it is broad and straggling. The species is a native of the woods of Paecta, a small village in the Andes, on the ascent from Guazaquil to Loxa, at an elevation of 6000 feet, where it was found by Mr. Hartweg. — *Bot. Reg.* 24-45.

*Peristeria Humboldti* var. *fulva*. A rich, tawny, yellow-coloured variety of the now pretty well-known *P. Humboldti*, which flowered in the collection of Mr. Barker, of Birmingham, in June, 1843. Its native country is Venezuela, where the original species was first detected by Humboldt. It is one of the most striking among Orchidaceous plants, and few are more worthy of cultivation; the raceme is a foot and a half to two feet long, pendent from the base of the pseudo-bulb; the flowers are numerous, large, fleshy, of a tawny yellow colour, dashed almost all over with spots of purplish brown, and of an irregular globose form; the colour of the lip is a brighter yellow than the rest of the flower, and the spots are deep purple. — *Bot. Mag.* 4156.

*Angracum apiculatum.* From Sierra Leone, introduced to our gardens by Mr. Whitfield in 1844. I was at first disposed to consider it the same with *A. bilobum*, but that has semi-pellucid, reticulated leaves, distinctly and deeply two-lobed at the extremity; the rachis of the raceme and peduncle are warty, and the spur is dilated and emarginate at the apex, while in this plant the leaves are obliquely apiculate, opaque, and longitudinally striated, the rachis quite smooth, and the long filiform spur entire at the apex. In other respects the two plants seem almost entirely to agree. — *Bot. Mag.* 4159.

*Dendrobium fimbriatum var. oculatum.* A variety which flowered in the Royal Botanic Gardens of Kew, in September, 1843, having a dark, blood-coloured, eye-like spot in the centre of the labellum, which adds greatly to the beauty of this otherwise very charming plant. This state of it Dr. Lindley considers that of the native specimens. — *Bot. Mag.* 4160.

*Polystachya bracteosa.* A native of Sierra Leone, communicated by Mr. Whitfield to the Kew Gardens; the pseudo-bulbs are about an inch in diameter, suborbicular, singularly compressed, and the old ones, especially, very uneven on the surface. From the summit arises a stout petiole, bearing a solitary, oblong-ovate leaf, from the base of which, in a cleft at the summit of the petiole, arises the peduncle, bearing a many-flowered, drooping, downy raceme, of bracteated, dull orange-yellow flowers, individually small, and not remarkable for beauty. — *Bot. Mag.* 4161.

#### SCROPHULARIÆ. — *Diandria Monogynia.*

*Calceolaria alba.* A native of Chili, but probaby of rare occurrence; at least, it has not till now been introduced to our gardens. Mr. Veitch received seeds from his collector, Mr. W. Lobb, and plants raised from them flowered in his nursery in September, 1844. It is singular in the very pale, nearly white, colour of the flowers; the foliage, though narrow, is copious, and the plant has an erect and graceful mode of growth. The species will perhaps bear our mild winters. — *Bot. Mag.* 4157.

#### ACANTHACEÆ. — *Didynamia Angiospermia.*

*Salpixantha coccinea.* Collected by Mr. Purdie in Jamaica, and by him sent to the Royal Gardens, Kew, where it blossomed freely in the stove during the autumn and winter of 1844-5, and made a very pretty appearance with its gracefully pendent scarlet blossoms, and its well-formed, dark green foliage. It is a low, branching shrub, glabrous in every part, with ample, opposite leaves; the peduncles are axillary and solitary, or terminal, and then ternate, drooping; the lateral ones, however, terminate a two-leaved branch, or innovation, while the central peduncle springs from the apex of the older branch; the upper part of this peduncle bears rich, red-coloured flowers, arranged in a spike, the flowers decussately opposite, bearing some resemblance to those of *Manettia cordata*. — *Bot. Mag.* 4158.

#### BEGONIACEÆ. — *Monæcia Polyandria.*

*Begonia ramentacea.* A dwarf species, with very close-jointed stems, almost hidden with its beautiful foliage, dark green on the upper side, and crimson beneath, above which the flower-stalks rise a few inches, and terminate in a spreading, cymose cluster of whitish blossoms, delicately tinged with blush. As the flowers decay, the large winged seed-vessels assume a rich crimson hue, and are hardly less attractive. It was imported some years ago from Brazil to the nursery of Messrs. Young, of Epsom. The genus was established by Linnaeus, and commemorates a French patron of botany, M. Michael Begon. — *Pax. Mag. Bot.*

#### RUTACEÆ. — *Octandria Monogynia.*

*Correas, five seedling varieties.* Obtained by Mr. Gaines, nurseryman, of Battersea. The first, *Picta*, was raised between *virens* and *speciosa*, and possesses a strong, graceful habit, and good foliage: in its flowers it partakes considerably of the appearance of the latter; No. 2., *Rubescens*, originated betwixt *speciosa* and *Lindleyana*, and has very bright-coloured, large flowers, with an upright habit, and shining foliage; No. 3., *Delicata*, is, perhaps, the most decided novelty, and certainly the most beautiful among them: it

combines the form of *alba* with much of the delicate colouring of its other parent *rosea*; the inner surface of its spreading limb is of the richest bright silky texture, and the flower being upright instead of pendulous, this portion is exposed to view; No. 4., *Ferruginea*, sprung from *alba* and *Grevillii*, and is a free bloomer; and No. 5., *Pallida*, is a fine, long, cream-coloured flower, with an excellent character of growth: it was produced from *rufra* and *alba*, and flowers very copiously. — *Pax. Mag. Bot.*

APOCYNACEÆ. — *Pentandria Monogynia*.

*Allamanda grandiflora*. This plant was discovered by Mr. Gardner whilst exploring the Brazils; and from seeds supplied by him in 1836, it was reared in the Comely Bank Nursery, Edinburgh. It seems doubtful whether it can be regarded as a distinct species, and we are more disposed to regard it as a strongly-marked variety of *A. cathartica*. The most prominent distinguishing traits which it presents are the larger size of the blossoms, usually between four and four inches and a half in diameter, their paler colour, and the absence of a climbing character. The leaves, moreover, are smaller, more closely nerved, and commonly three in a whorl, whilst the complement in *A. cathartica* is generally four. A healthy plant, under good management, will form a compact bush, two or three feet high, and nearly as much across, in the course of a season. The blossoms are disclosed during the latter part of summer, and continue to open till late in October. — *Pax. Mag. Bot.*

LEGUMINOSÆ. — *Diadelphia Decandria*.

*Lupinus ramosissimus*. This is a pretty, half-hardy, shrubby species, with purple flowers, growing three or four feet high in any good garden soil, and well suited for cultivation in the open border, if treated as a summer annual. The plant was raised in the garden of the Horticultural Society, from seeds collected by Mr. Hartweg on Chimborazo, at an elevation of 13,000 feet above the level of the sea. The flowers smell like those of the sweet pea. — *Bot. Reg. 25-45.*

CRASSULACEÆ. — *Decandria Pentagynia*.

*Echeveria Scheerii*. Although this is by no means so handsome a species as some of those already known, it is far from being unworthy of cultivation. Its leaves are large and glaucous, and its orange-red flowers, notwithstanding their dingy colour, are abundant, tolerably large, and gracefully arranged. For its introduction the public is indebted to Frederick Scheer, Esq., of Kew, a zealous collector of succulent plants, and whose name it will henceforth bear. It is a native of Mexico, whence seeds were received by that gentleman, and presented to the Horticultural Society in September, 1842. It flowers in the winter. — *Bot. Reg. 27-45.*

GOODENIACEÆ. — *Pentandria Monogynia*.

*Goodenia grandiflora*. This plant was raised in the garden of the Horticultural Society from among a parcel of seeds presented by Mr. Bidwill, and the packet was labelled "New Zealand." It is, however, beyond all doubt, the same as the Port Jackson plant, which was long since introduced to this country, but which seems to have been generally lost again. Are we then to conclude that *G. grandiflora* is common to both New Holland and New Zealand? or are we to suspect some error in the ticketing? Be that as it may, it is certain we have recovered a very pretty greenhouse perennial (not annual or biennial), well worth cultivating for the sake both of the gay appearance of the bright yellow flowers, and of their fragrance, which is that of orange bloom, only much less powerful. — *Bot. Reg. 29-45.*

## ON THE CINERARIA.

WITH AN ILLUSTRATION.

WE were surprised and somewhat amused a short time since by the expression of a sentiment on the part of an eminent botanist of the present day, who, when describing a newly imported species of *Calceolaria*, expressed a hope that it might not be subject to the innovations of the florist, whose manipulations produced a new race of forms, so much to the deterioration of the original parent, that for it to live neglected or unnoticed he considered quite an escape. Our surprise was awakened by the fact, that one so pre-eminently distinguished by a love of the science and of floral beauty, could be blinded to the improvements effected in the manner thus contemned, merely by an adherence to a set of artificial rules, so imperfect in themselves as to be continually in need of alterations and new adaptations ; and our amusement was elicited from the seriousness which pervaded the paragraph in question. Now though these new forms of the florists' obtaining do somewhat interfere with the arrangements of botanists, what disparagement can be offered them ? It must be conceded the new forms are superior to the old ones in some important point or other ; was it not so, the florist would discontinue his care of them, and there would be an end of the innovations complained of : an increase of the floral parts, with an intermixture of the colours already possessed by the subjects operated on, or the introduction among them of new shades, so as to extend their interest and thus render them more enjoyable, is the florist's aim ; and to the happy result of such labours we really think much of the love of plants now so universally exhibited may be fairly and easily traced.

For a proof of what has already been done by the florist we need only instance the subject of our present paper. The *Cineraria* has not, however, repaid the attention bestowed upon it with the same striking improvement that marks some other vegetable forms so unfortunate as to be included in the florist's list of favourites, probably because sufficient time has not elapsed to develope all its capabilities ; for these advances are made only by slow and, in some instances, almost imperceptible gradations,

secured by the most unremitting perseverance and patient skill, and again extended by another effort equalled only by the last; yet, in their present merely progressive state, who that claims to be an admirer of real beauty, possessing but an idea of the loveliness of proportion, would desire to see them return to their normal condition?

For the benefit of those who are raising seedlings, we append the rules by which these flowers are usually judged, as an assistance to the proper estimate of their several new productions:—

The plants should possess a neat compact habit, amply filled with medium-sized foliage, the bloom stems rising above the leaves so as to exhibit the flowers, free from obstruction and in a conspicuous manner. The presence of these characteristics indicate rather good management than a constitutional form, still their absence is a fatal objection. The florets (in common parlance petals) should proceed from the centre or disk, in an horizontal position, quite flat, and they should be of sufficient width to overlap each other, so as to leave no interstices between them; the more nearly they approach a perfectly unbroken circle on the margin, so much nigher are they to perfection: the proportion of the disk to that of the whole flower should be as one is to three, and the colour or colours must be clearly defined, dense, and decided; of course novelty in this point is an acquisition, though it must not be purchased at the expense of either of the preceding properties; size, though a necessary qualification, is considered of least importance, because a well-formed small flower is every way preferable, and more pleasing to the discriminating eye of taste, than a huge misshapen object; still one, being only equal in other respects and somewhat larger, would have the advantage of its predecessors. A correspondent in the last April number has anticipated all we could say on the cultivation of these beautiful ornaments of spring, only we may warmly recommend them as window plants, feeling certain that every satisfaction will result if only the most moderate amount of care be given them: fresh soil and pots once a year, protection from frost, and the proper supply of water, is the summary of their treatment in such situations, the return for which is a rich display of light and elegant forms, tinted with almost innumerable shades of colour.

We obtained our illustrations from the extensive collection of Mr. Ivery, Nurseryman, &c. of Peckham, who has directed his

particular attention to the improvement of this genus for several years past, and now possesses an unrivalled assemblage. The present subjects are seedlings of the present season, and we think need no commendation.—ED.

## FLORAL INTELLIGENCE.

### ROYAL BOTANIC SOCIETY.

THE first exhibition for the season occurred on Wednesday, May 7th, at the Gardens of the Society in the Regent's Park, and being the first of the great metropolitan meetings, was looked forward to with much interest. The effect produced by the numerous collections of magnificent plants that were present was grand, their number and variety far exceeding our limits of description; we must therefore confine our particular notices to the finest plants of the best collections. There were three competitors for the principal prize offered for thirty stove and greenhouse plants, and the collection of Mr. Hunt, gardener to Miss Trail, of Bromley, was placed first; in it were fine plants of *Azalea indica variegata*, a foot and a half high and two feet across; *A. ind. ledifolia*, a large plant; *A. ind. lateritia*, a round plant, and two plants of the double red and double white worked on each other and intermingled, all of them covered with bloom; *Ixora coccinea*, a splendid plant, about three feet high, with twenty-six heads of flowers; *Achimenes grandiflora*, three feet across and a mass of bloom; *Dillwynia floribunda*, *Chorozema Henchmanii*, trained to a round trellis and well flowered; *Tropaeolum tricolorum*, and *Zichya villosa*, on a shield-formed trellis, looking gay with their numerous bright coloured flowers; *Phenocoma prolifera*, three feet, and proportionately thick; *Gompholobium polymorphum*, on a large shield, perhaps as fine as ever it was seen; *Eriostemon buxifolius*, *Polygala oppositifolia*, beautiful plants of *Erica aristata*, *E. perspicua nana*, *E. amplexicaulis rubra*, *E. Hartnelli*, and *E. suaveolens*, &c. The other large collections shown by Mr. Barnes and Mr. Green were excellent, the three nearly equalling each other: in those from Mr. Barnes were *Brassia maculata*, with six spikes; *Ixora crocata*, *Aphelexis humilis*, two feet high, and well flowered;





*Oncidium luridum guttatum* ; *Pimelea Hendersonii*, a beautiful plant covered with dense heads of pink flowers ; *Leschenaultia formosa*, two feet high, very fine ; *Eriostemon cuspidatus*, well flowered, and many other equally good specimens, which we have not space to enumerate. Mr. Green, to whom the third prize was awarded, had especial fine plants of *Aphelexis humilis*, *Gongora atropurpurea*, with thirty-six spikes of flowers, exceeding anything of the kind we had before seen ; *Calanthe veratrifolia*, with four large and six small stems ; well flowered plants of *Epiphyllum Ackermanii*, *E. coccineum multiflorum*, *E. speciosum*, and *Cereus speciosissimus*, &c.

In the collection of fifteen stove and greenhouse plants there were four competitors : Mr. Frazer, Nurseryman, of Lea Bridge Road, obtained the first prize for *Azalea indica phœnicea*, well bloomed ; *A. ind. lateritia*, a nice plant ; *Bossiæa cordata*, two feet high, and very handsome ; *Podolobium staurophyllum*, allowed to become too tall ; *Tropæolum tricolorum*, a large plant ; *Epacris grandiflora*, a large *Pimelea linifolia*, an excellent *Boroniaserrulata*, a good *Erica propendens*, and *E. campanulata*, *Chorozema Henchmanii*, *C. angustifolium*, *Franciscea uniflora*, and *Euphorbia splendens*.

There were ten competitors in the class for ten plants. The first prize was awarded to Mr. Bruce, gardener to B. Miller, Esq. of Tooting, for perfect specimens of the following plants :—*Adenandra uniflora*, *Pimelea spectabilis*, *Ixora coccinea*, *Erica propendens*, *Gnidia pinifolia*, *Azalea indica variegata*, *Aphelexis humilis*, *Azalea Gledstanesii*, *Chorozema Henchmanii*, and *C. varium*.

The specimen plants were numerous and fine. The first prize was given to Messrs. Lucombe, Pince, and Co., of Exeter, for a splendid plant of *Eriostemon buxifolius*, a complete pyramid, seven feet high, and covered with bloom. The second prize was given to the same gentlemen, for *Acrophyllum venosum*, cultivated in a very superior manner ; and the third prize to Mr. May, gardener to E. Goodheart, Esq., of Beckenham, for *Erica elegans*, about a foot high, and densely covered with flowers. Extra prizes were given to Messrs. Veitch and Sons of Exeter, for *Leschenaultia biloba* ; Mr. Robertson, gardener to Mr. Lawrence, Ealing Park, for *Erica propendens* ; Mr. Marsden, for *Hydrangea japonica* ; Messrs. Lucombe, Pince, and Co., for *Erica elegans*, and for *Azalea indica Lucombeana* ; and to Mr. May, for *Azalea ind. lateritia*.

For new or rare plants in bloom, the first prize was awarded to Messrs. Lucombe and Co., for *Rhododendron campanulatum hybridum*, bearing immense trusses of large flesh-coloured flowers, spotted on the upper part with well-defined dark spots. The second prize was given to the same, for a new species of *Gompholobium* from Swan River, with large crimson flowers and a shrubby habit ; and the third prize to the same, for *Bossiæa paucifolia*. Messrs. Veitch exhibited a species of *Lisianthus*, from Brazil, with large oval leaves, and obtained the second prize for a new plant not in bloom.

The first prize for Papilionaceous plants was awarded to Mr. Kyle, gardener to R. Barclay, Esq., of Leyton, for *Zichya inophylla*, *Z. villosa*, *Hardenbergia monophylla*, *Podolobium staurophyllum*, *Crotalaria purpurea*, *Bossiaea disticha*, *Podolobium trilobatum*, *Pultenæa stipularis*, *Erythrina laurifolia*, *Chorozema macrophyllum*, *Mirbelia Baxterii*, and *Polygala acuminata*, misplaced. A collection of Gesneraceous plants, from Mr. Dobson, gardener to Mr. Beck, of Isleworth, were very beautiful; it consisted of masses of *Achimenes pieta*, *A. grandiflora*, *A. longiflora*, *A. rosea*, and good plants of *Sinningia guttata*, *Gloxinia rubra*, *G. candida*, *G. Cartonii*, *G. variegata*, and a purple seedling, and received a second prize.

In the collection of fifteen Heaths, the only competitor, E. Goodheart, Esq., received the first prize for a fine group, consisting of *E. aristata*, *E. mutabilis*, *E. grandinosa*, *E. Hartnelli*, *E. propendens*, *E. Beaumontia*, *E. linnæoides*, *E. Willmoreana*, *E. fastigiata lutescens*, *E. andromedæflora*, *E. perspicua nana*, *E. rubra calyx*, *E. echiiiflora purpurea*, *E. odorata*, and *E. mundula*. The first prize in the collections of twelve was obtained by Messrs. Fairbairn, with *E. ventricosa coccinea minor*, *E. Hartnelli*, *E. intermedia*, *E. mundula*, *E. aristata major*, *E. Humea*, *E. suaveolens*, *E. ampullacea carnubrata*, *E. Cavendishii*, *E. denticulata moschata*, *E. favoides elegans* and *E. vestita alba*. The best eight were shown by Mr. Hunt; they were *E. aristata*, *E. Hartnelli*, *E. Sprengelii*, *E. odora rosea*, *E. perspicua nana*, *E. Willmoreana*, *E. ventricosa prægnans*, and *E. depressa*. The best six were from Mr. Reid, gardener to E. Wigram, Esq., of Walthamstow, and consisted of *E. Beaumontia*, *E. ventricosa prægnans coccinea*, *E. fastigiata lutescens*, *E. mundula*, *E. perspicua nana*, and *E. florida*.

The Azaleas were very beautiful, and attracted much notice. The best twelve were from Mr. Smith, nurseryman, of Norbiton; they were, *Magnifica plena*, *Atrorubens*, *Decora*, *Amabile splendens*, *Bicolor nova*, with a dash of purple in the upper portion of the flower; *Rosea superba*, *Pallida*, *Formosa*, *Alba superba*, *Punctata*, *Broughtonii*, a large light red with purple spots; and *Mirabilis*. Mr. Green, gardener to Sir E. Antrobus, Bart., of Cheam, exhibited the best ten: they were, *Variegata*, very fine; *Macrantha*, *Ledifolia*, *Gledstanesii*, *Præstantissima*, a light scarlet; *Georgiana*, *Alba multiflora*, *Speciosissima*, *Jenkinsonii*, and *Exquisita*. The first prize for six was taken by Mr. Clarke, of Muswell Hill, with *Rawsonii*, *Ledifolia*, *Phœnicea*, *Smithii coccinea*, *Double Red* and *Double purple*.

The Orchidaceous plants were limited in number. Messrs. Henderson obtained an extra prize with the following ten: — *Epidendrum variegatum*, *Acanthophippium bicolor*, *Maxillaria ochroleuca*, *Oncidium papilio*, *O. luridum*, *O. carthaginense*, *O. pumilum*, *Lycaste cruenta*, *Calanthe veratrifolia*, and *Saccolabium micranthum*. The best six were shown by F. G. Cox, Esq., of Stockwell; they were *Dendrobium nobile*, *D. fimbriatum*, *Brassia maculata*, *Epidendrum crassifolium*, *E. selligerum*, and *Oncidium altissimum*.

*Caleeolarias* were shown by Mr. Gaines, of Battersea, who obtained the first prize with the following: *Sylph*, *Vivid*, *Eclipse*, *Candidate*, *Crimson*, *Superb*, and *Venosa*.

The best four *Cinerarias* were shown by Messrs. Lane and Son: *Hendersonii*, *Unique*, *Mello Park*, and *Conspicua*.

An extra prize was awarded to Mr. Kendall, of Stoke Newington, for a collection of *Fuchsias*, consisting of *Vesta*, *Chandlerii*, *Coronet*, *Defiance*, *Erecta elegans*, *Robusta*, and *Iveryana*.

The *Pelargoniums* were in admirable condition. In the Amateur's class, of the new varieties grown in 24-sized pots, Mr. Dobson was the only exhibitor; he exhibited *Cleopatra*, *Zanzummin*, *Conflagration*, *Sultana*, *Bella*, *Capella*, *Milkmaid*, *Sergeant*, *Lord Chancellor*, *Matilda*, *Lurida*, and *Flora*. In the Nurserymen's class for the same description of plants, Mr. Gaines was also alone; his plants were, *Lady Prudhoe*, *Gaines' Rising Sun*, *Queen of*

Bourbon, Rosalind, Pirate, Augusta, Gaines' Princess Alice, Saxon King, Imperialis, Lydia, Cotherstone, and Hermoine.

In the Amateur's class of twelve plants in 12-sized pots, Mr. Parker, gardener to J. H. Oughton, Esq., of Roehampton, obtained the first prize with the following: Queen of Beauties, Wizard, Bleda, Priory Queen, Pomona, Mabel, Erectum, Coronation, Bridesmaid, Comte de Paris, Queen Consort, and Unit. In the Nurserymen's class, Mr. Gaines took the first prize with Lady Isabella Douglass, Nymph, Juba, Albion, Gaines' Lady Sale, Coronation, Lord Mayor, Sylph, Madeline, Vanguard, Emperor, and Ivanhoe.

The first prize for twenty Roses in pots was taken by Messrs. Lane and Son, of Berkhamstead, with beautiful plants of the following kinds: Diana, Millier, Phoenix, Vernon, Triomphe de Luxembourg, Grand Capitaine, Niphetus, William Jesse, Canville, Armosa, Fabvier, Cramoise Supérieure, Madame Lafay, Ma Jolie, Auberon, Anteros, Eliza Sauvage, Barbot, Leveson Gower, and Duc d'Aumale. In the collections of ten, Mr. Stowe, of Bayfordbury, obtained the first prize, with Cramoise Supérieure, Mrs. Bosanquet, Napoleon, Triomphe de Luxembourg, Soprano, Gardinier, Alcine, Abricote, Imene, and Bourbon Queen.

There were three exhibitors of Pansies. Mr. Brown, of Slough, took the first prize with the following thirty-six varieties: Atilla, Brown's Arethusa, Hannibal, Regulator, Purple Perfection, Seedling R. 1844, Seedling F. 1844, Cyclops, Seedling G. 1844, Royal Standard, Jehu, Duchess of Beaufort, Lady Carrington, William Tell, No. 80, King, Seedling 1845, Duchess of Richmond, Hale's Dark, Brown's Curion, Mary Anne, Eclipse, Seedling, Isabella, Rufus, Middleton, Hero of Bucks, Seedling W. 1844, Cotherstone, Exquisite, Pizarro, Fair Maid, Napoleon, Mulberry Superb, Seedling H. 1844, Mary Jane, and Gosset's Dark.

A great many Seedlings were present, from among which the following were selected and obtained prizes: Azalea Murryana, from Mr. Murray, of Twickenham, a large bright rose-coloured flower of good properties; Azalea, Duke of Devonshire, from Messrs. Lucombe and Co., light scarlet, of good form; Azalea semi-duplex pura, from Mr. Smith, Norbiton, double, rosy-pink, very pretty; two seedling Pelargoniums of 1845, from Mr. Beck; the first, "Patrician," a shaded rose, of good form and substance, and "Hebe's Lip," somewhat like the other. Mr. Beck had also another, "Resplendent," approaching the scarlet colour so much desired. Two seedling Calceolarias, from Mr. Gaines, named Madonna and Harlequin, the former a cream colour with purple blotches, and the latter yellow, mottled and chequered with brown.

Seedling Cinerarias were numerous; three were selected for extra prizes: two exhibited by Mr. Jackson, of Bedale, called Lady Prudhoe, a large deep blue, and Countess of Zetland, bright rose; and third by Mr. Pamplin, of Walthamstow, named Azurea.

Many other promising seedlings were exhibited, but their number precludes the possibility of even a bare mention. The following is a list of the prizes awarded:

For a collection of 30 Stove and Greenhouse Plants: 1st prize, to Mr. Hunt; 2d, Mr. Barnes, gardener to G. W. Norman, Esq., Bromley; 3d, Mr. Green.

For a collection of 15 ditto: 1st, Mr. Frazer, nurseryman, Lea Bridge Road, Leyton; 2d, Mr. Pawley, White Hart, Bromley; 3d, Messrs. Veitch and Sons, Exeter.

For a collection of 10 ditto: 1st, Mr. Bruce; 2d, Mr. Slowe, gardener to W. R. Baker, Esq., Bayfordbury Park; 3d, Mr. Cockburn, gardener to the Earl of Mansfield, Caen Wood; 4th, Mr. Taylor, gardener to J. Costar, Esq., Streatham.

For specimen Ornamental Plants: 1st, Messrs. Lucombe and Co.,

Exeter, for *Eriostemon buxifolium*; 2d, to the same, for *Acrophyllum venosum*; 3d, to E. Goodheart, Esq., Langley Park, Beckenham, for *Erica elegans*; Extra to Messrs. Veitch and Sons, for *Leschenaultia biloba*; to Mr. Robertson, gardener to Mrs. Lawrence, Ealing Park, for *Erica propendens*; to Messrs. Lucombe and Co., for *E. elegans*; to the same, for *Azalea indica leucomgista*; to E. Goodheart, Esq., for *A. lateritia*; to Mr. Marsden, for *Hydrangea japonica*.

For new or rare plants in bloom: 1st, Messrs. Lucombe and Co., for *Rhododendron campanulatum hybridum*; 2d, to the same, for *Gompholobium* sp. no.; 3d, ditto, for *Bossiaea paucifolia*; Extra to Messrs. Veitch and Son, for *Tropaeolum Lobbianum*.

For new or rare plants not in bloom: 2d, to Messrs. Veitch and Son, for *Lisianthus* sp. no.

For a collection of 24 Alpine plants: 1st, Mr. Wood, Norwood.

For 12 Papilionaceous plants: 1st, Mr. Kyle, gardener to R. Barclay, Esq., of Leyton; 2d, Mr. Clark, gardener to W. Block, Esq., Muswell Hill.

For a collection of 4 Cinerarias: 1st, Mr. Lane, Berkhamstead; 2d, Mr. Ivery, Peckham; 3d, Mr. Gaines, Battersea.

For a collection of 10 Gesneraceous plants: a prize to Mr. Dobson.

For 15 Cape Heaths: 1st, E. Goodheart, Esq.

For 12 ditto: 1st, Messrs. Fairbairn, Clapham; 2d, Mr. Pawley.

For 8 ditto: 1st, Mr. Hunt; 2d, Mr. Barnes; 3d, Mr. Taylor.

For 6 ditto: 1st, Mr. Reid, gardener to E. Wigram, Esq.; 2d, Mr. Young, gardener to C. Barron, Esq., Camberwell.

For 12 Greenhouse Azaleas: 1st, Mr. Smith, Norbiton; 2d, Mr. Gaines.

For 10 ditto: 1st, Mr. Green, gardener to Sir E. Antrobus, Bart.

For 6 ditto: 1st, Mr. Clark; 2d, Mr. Barnes.

For specimen Rhododendrons: 1st, Mr. Smith, for *Macranthum*; 2d, to the same, for *Albiflorum*.

For a collection of 10 Orchidaceæ: a prize to Mr. Henderson, Pine Apple Place, Edgeware Road.

For 6 ditto: 1st, to F. G. Cox, Esq., Stockwell; 2d, Mr. Hunt; 3d, Mr. Barnes.

For 30 British Ferns in pots: 1st, Mr. Taylor.

For seedling greenhouse Azaleas: 1st, Mr. Kinghorn, gardener to A. Murray, Esq., Twickenham, for *Murrayana*; 2d, Messrs. Lucombe and Co., for Duke of Devonshire; 3d, Mr. Smith, for *Semi-duplex pura*.

For 6 Calceolarias: 1st, Mr. Gaines.

For 12 new Pelargoniums, in 24-sized pots: 1st, Mr. Dobson, gardener to E. Beck, Esq., Isleworth.

For 12 ditto (nurserymen): 1st, Mr. Gaines.

For 12 ditto, in No. 12 pots: 1st, Mr. Parker, gardener to J. H. Oughton, Esq., Roehampton; 2d, Mr. Slowe.

For 12 ditto (nurserymen): 1st, Mr. Gaines.

For seedling Pelargoniums of 1845: Certificates to Mr. Beck, for Patriotic and Hebe's Lip.

For seedling Pelargoniums (deep scarlet): Certificate to Mr. Beck, for Resplendent.

For seedling Calceolarias: Certificates to Mr. Gaines, for Madonna and Harlequin.

For seedling Fuchsias: Certificates to Mr. Lane, for Mrs. Lane.

For a collection of 20 Roses in pots: 1st, Mr. Lane.

For 10 Roses in pots: 1st, Mr. Slowe; 2d, Mr. Dobson.

For a device illustrating the principles of arrangement and combination of colours: 1st, Mr. Barton.

For 36 Pansies: 1st, Mr. Brown, Slough; 2d, Mr. May, Tottenham.

Extra Prizes were awarded for the following miscellaneous subjects to Mr. Jackson, Bedale, for 2 Cinerarias; to F. G. Cox, Esq., for 6 varieties of Schizanthus; to Mr. Kendall, Stoke Newington, for 7 Fuchsias; to Mr. Pamplin, Walthamstow, for a seedling Cineraria.

### NOTTINGHAM FLORAL AND HORTICULTURAL SOCIETY.

#### *Spring Show, open to all England.*

ON Wednesday, May 7th, a show, open to all England (the first of the kind in this town), was held at the Exchange Rooms, under the patronage of the Mayor. The exhibition was opened at two o'clock, for the admission of a numerous and fashionable company; and a more captivating *coup d'œil* can scarcely be conceived than was presented on entering the room. The plants, generally speaking, were in excellent condition: the greenhouse Azaleas, which occupied a considerable space, added much to the splendour of the scene, by their thousands of gay and lively blooms. F. Wright, Esq., took the first prize, for six admirably-trained plants; and the prize for the best single specimen was likewise taken by the same gentleman, the second prize being awarded to A. Lowe, Esq., for *Indica alba*. Mr. Pearson obtained the first prize for six Fuchsias, and likewise for the single specimen, which was a most beautiful plant. Mr. F. Wright was also the most successful competitor for the six best distinct greenhouse plants, Mr. Lowe taking the second prize. A miscellaneous collection of plants (consisting of upwards of 200) in flower, forwarded by Mr. Pearson, was greatly admired; and two miscellaneous collections of twenty house plants, forwarded by Mr. F. Wright and Mr. Lowe, attracted much attention. The Hyacinths, considering the lateness of the season, were truly splendid, and their delightful fragrance filled the room; they were forwarded by Mr. S. Wright. The Auriculas, which we could scarcely have expected, considering the late spring, were also very excellent, and were greatly admired; they were sent by Mr. Staton, Mr. Harpham, and Mr. Pearson.

## ROYAL SOUTH LONDON FLORICULTURAL SOCIETY.

THIS Society's second show for the season took place on Wednesday, May 21st, in the Surrey Zoological Gardens, when the following prizes were awarded :—

5*l.*, offered by J. Coppock, Esq., for the best eighteen miscellaneous plants, was won by Mr. Pawley of Bromley, with a collection containing, among others, good plants of *Erica ventricosa*, *coccinea minor*, *E. perspicua nana*, *Gompholobium polymorphum*, *Colconema pulchellum*, *Azalea indica variegata*, and *Pimelea decussata*. In the amateur's class the Society's first prize for eighteen plants, the gold medal, was awarded to Mr. G. Young, gardener to C. Barron, Esq. of Camberwell, for a collection containing *Azalea ledifolia*, *Erica gelida*, *E. Thunbergia*, *E. Humea*, *E. propendens*, *Siphocampylos betulaefolius*, *Cytisus racemosus*, &c. The large silver Victoria medal was taken by Mr. Hamp for the second best eighteen; among them were *Azalea indica alba*, very fine, *Epacris grandiflora*, *Correa speciosa*, a large plant, *Pimelea spectabilis* and *decussata*, two *Amaryllis*, *Boronia pinnata*, *Erica hybrida*, &c. The third prize, large silver Linnæan medal, was awarded to Mr. Jones, Herne Hill, in whose collection were small plants, but well-bloomed, of *Cytisus racemosus*, *Thunbergia alata*, *Azalea latertia*, *A. variegata*, *Statice mucronata*, *Selago Gillsii*, &c. A fourth prize, the small silver Victoria medal, was given to Mr. Kay of Wandsworth for eighteen, containing *Eranthemum pulchellum*, *Statice puberula*, *Genista canariensis*, *Cineraria*, *Fanny Elsler*, &c. The first prize for twelve tulips, large Victoria medal, was taken by Mr. Venables of Kennington, with *La Tendresse*, *Laurence's Friend*, *Walker's King*, *Rosa Blanca*, *Washington*, *Ali Pacha*, *Fleur des Dames*, *Transparens Noir*, *Sanzio*, *Mantan Ducal*, *Violet Alexander*, and *Roi de Navarre*. The second, large silver Linnæan, by Mr. C. Smith, with *Queen Boadicea*, *Transparens Noir*, *Surpasse Catafalque*, *La plus Belle*, *Sanzio*, *Addison*, *Milton*, *Triomphe Royale*, *Catalani*, *Man of Kent*, *Aglaia*, and *Violet Triomphant*. The first prize for twenty-four *Heartsease* was taken by Mr. Parsons; the second by Mr. Edwards; the third by Mr. W. Hall; and the

fourth by Mr. Atterton. The large silver Victoria medal was awarded to Mr. Doran for the following eight *Cape Heaths* — *Erica ampullacea vittata*, *E. vestita alba*, *E. Pattersoni*, *E. hybrida*, *E. perspicua nana*, *E. princeps*, *E. Hennea*, and *E. Beaumontia*.

In the Nurserymen's class, Mr. J. Pamplin obtained the large silver Linnæan medal for a collection of twenty-four plants, in which were neat specimens of *Diosma ericoides*, *Coleonema rubrum* and *gracilis*, very good; *Prostanthera violacea*, a beautiful and free-flowering species; *Boronia pinnata*, *Erica regerminans*, *E. quadriflora*, &c. The gold medal was given to Mr. Gaines for twelve *Pelargoniums*: *Una*, *Lord Mayor*, *Cyrus*, *Coronation*, *Nymph*, *Madeline*, *Lady Sale*, *Lady Isabella Douglass*, *Albina*, and *Ivanhoe*. Mr. Pawley took the large silver Linnæan medal for twelve *Cape Heaths*; and Mr. Hart of Guildford the small silver Victoria for forty-eight varieties of *Hearts-ease*.

In the Open class, J. H. Schröder, Esq., obtained the large silver Victoria medal for the following six orchidaceous plants: *Vanda cristata*, *Calanthe veratrifolia*, *Trichopilia tortilis*, *Cattleya Skinnerii*, *Lycaste Harrisoniae*, and *Dendrobium densiflorum*.

The best collection of four plants which received the large silver Victoria medal, was shown by Mr. Pawley; they were *Pimelea spectabilis*, *Ixora coccinea*, *Aphelexis humilis*, and *Erica Cavendishii*, all of them in beautiful condition: the second prize for the same was awarded to J. Allnut, Esq., for *Erica propendens*, *Epacris grandiflora*, *Azalea variegata*, and *Zichya coccinea*, trained on a dead branch of fir to represent a tree; it had a good effect. The best single specimen, *Erica Cavendishii*, a magnificent plant, was shown by Messrs. Fairbairn, and received the large silver Linnæan medal; the second ditto, *Stephanotus floribundus*, a large plant on a flat trellis, was from Mr. Pawley; and the third, *Chorozema varium*, trained as a dwarf cone, was from J. Allnut, Esq. The small silver Linnæan medal was given to Mr. J. Gaines for four sorts of vegetables.

Extra prizes were given to Mr. Jennings, for a collection of succulents; to Mr. Chapman, for a basket of beautiful grapes; to Mr. Wood, for a collection of Alpine plants; and to Mr. Agate, for *Heartsease*. A first-class certificate was awarded to

Mr. Dalton, for a seedling tulip, called "Princess Alice," a bybloomen of good form, dark feather, and slightly flamed; and second-class certificates to the same, for another named "Prince of Wales," a bizarre, only a tolerable form, but pleasing colour. Mr. Dalton had also a box of seedlings, several of which promise to be useful flowers; second-class certificates to Mr. Henbrey, for a seedling Pansy, named "Rajah;" and to Mr. Hart for another, called "Consolation;" a similar certificate was given to a seedling Auricula, named "Atlas," from the Hon. and Rev. Robert Wilson, a useful green-edged flower.

#### LITERARY NOTICE.

A PRACTICAL TREATISE ON THE CULTIVATION OF ORCHIDACEOUS PLANTS, by J. HENSHALL. London: *R. Groombridge and Sons.* — A taste for the culture of these beautiful plants is very rapidly and widely extending. Any information on the subject is, therefore, well-timed, and must be useful. The first portion of the work before us is divided into five sections, treating briefly on the geographical distribution of Orchideæ, and in cultivation of the construction of houses for them, and the advantage of having more than one devoted to the purpose: on heat and moisture, two most important agents in the preservation of these and all other vegetable forms, and on the effect of light. The remaining part contains 32 chapters of practical information on the management of above a hundred genera. We are not disposed to allow a maudlin sensibility to prevent our speaking in terms of commendation of this work. Mr. Henshall is an old correspondent and contributor to the journal, and in his communications to us has been necessarily brief; here, however, he has enlarged his remarks, and added much useful matter, sufficient to make his treatise a boon to horticulturists generally. The "getting up" is executed in a finished style at once neat and suitable. We shall probably introduce a specimen of the work in our next Number.

## CALENDAR FOR JUNE.

THE progress of vegetation has been so very slow this season that even now, when such numbers of our native flowers ought to be in full perfection, they are scarcely to be found, or only in so stunted a form as hardly to convey a proper idea of what they ought to be. A great majority of the grasses may be found, however, during the month, and they will be highly interesting to those who have leisure to note the great variety of form displayed in a family of plants, among whom the mere casual observer would find little to excite attention. The Carexes also, and allied genera, will also be in flower in great numbers, but the collector will require to have them with their fruit near perfection ere he will be enabled to determine their names. But perhaps the most interesting family of British plants is the Orchises, the most of whom may be found during June in the pastures and woods, in the greatest variety, perhaps, in the south-east of England. They appear to particularly delight in a soil varying very little from an equable degree of moisture the most of the year, as hazel copses, damp meadows, and similar situations, especially on a chalky soil; such a soil appearing to retain a certain degree of moisture for a longer period than most others. Altogether, perhaps as many of our plants are to be found in flower during the present month as in any other during the year; it is, therefore, a busy time for the home botanist, and no time should be lost in collecting specimens for after arrangement and comparison.

The flower garden is in rather a transition state, especially at the beginning of the month, from the gaiety of spring to the splendour of summer, when the plants of nearly all parts of the world are turned out to flourish, for a short time, in our variable climate. The arrangement of the colours, and of the plants to represent those colours, should have been seen to in the winter; if so, the filling up now will have been greatly facilitated. A steady eye should also be kept on plants for propagating, especially in small places, where cuttings may often be taken, and a good stock got without disfiguring the plants too much, if taken often, instead of in quantities at once.

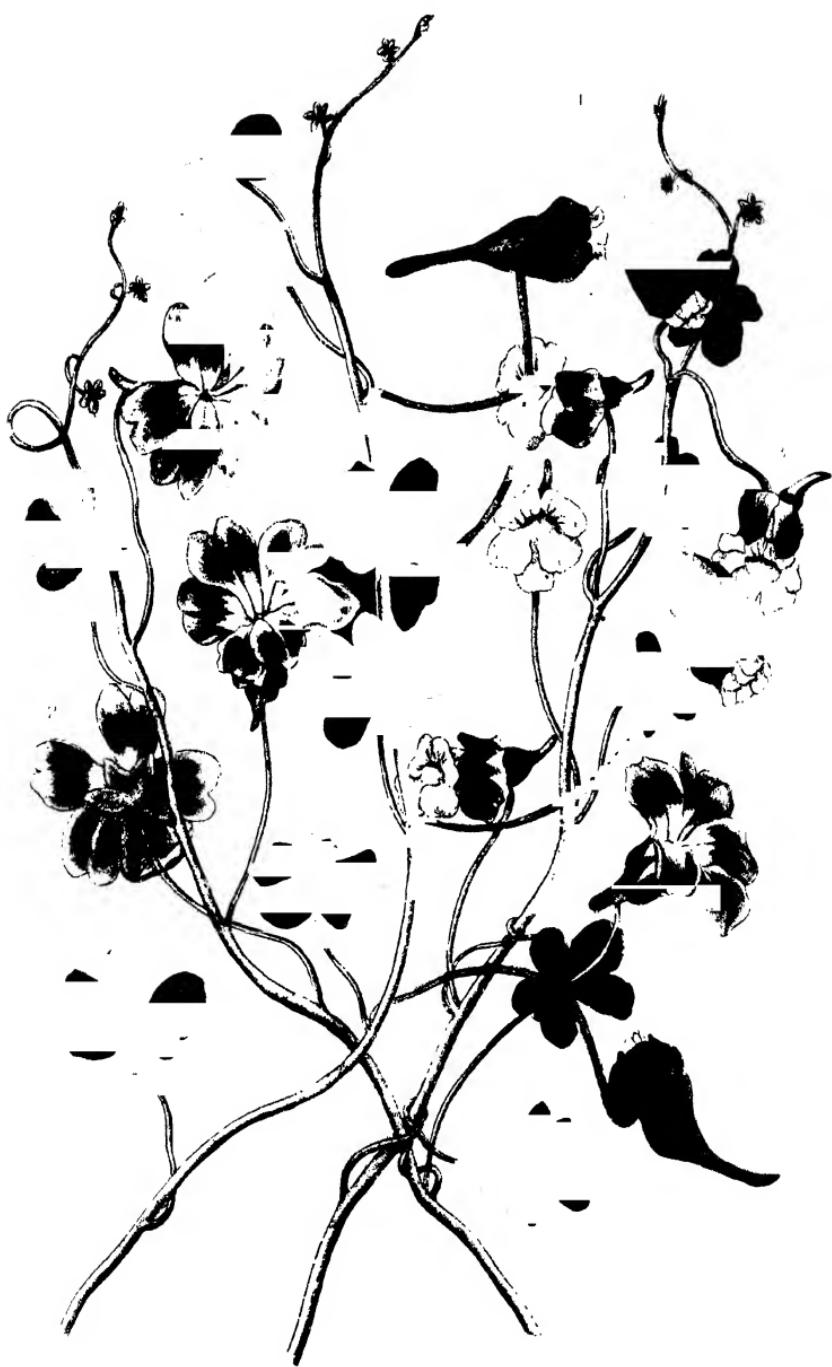
The greenhouse plants should be got into their summer quarters. For this purpose a shady but airy situation should be chosen—a most excellent place is the tulip bed, after the bulbs are removed, as by means of the awning any quantity of shade may be given, and drying winds avoided. Keep the houses thoroughly clean and sweet, giving the plants retained in doors all the room and air possible.

Many plants treated as inhabitants of the stove are better now in the greenhouse, or an intermediate house, if so miscellaneous a collection is kept as to require great heat and moisture in the stove. Great attention is necessary to prevent any appearance of the plants being *drawn*; at the same time, they must not be checked by sudden changes in their treatment, but a vigorous short-jointed growth maintained, and ultimate success may be confidently looked for.

D. M.

**FLORISTS' FLOWERS.**—Picotees, carnations and pinks, will now engross much care; constant attention must be given to preserve them in the necessary vigour and proper condition; the flower buds of the latter should be looked over every day, and tied to prevent splitting as often as will appear requisite, and the stems of the former supported to the sticks as they advance. The awning may be got over them any convenient time this month, but should not be used more than can be avoided till the flowers are further advanced. Dahlias should be thinned and tied. Ranunculus require plenty of water in dry weather, and a slight shade to preserve the bloom. Tulips may be got up as soon as the points of the foliage appear brown, choosing not only for comfort sake, but for the safety of the bulbs, the end of two or three warm dry days, for the operation; continue to propagate pansies, and to protect the opening flowers, not by means of an awning, but by small caps placed over each individual bloom. Preparation should be made for striking pinks, and layering carnations, &c., so that no time may be lost when the new wood is ready.





THE  
FLORIST'S JOURNAL.

JULY, 1845.

THE GENUS TROPÆOLUM.

WITH AN ILLUSTRATION.

THE species of this highly ornamental and interesting genus are for the most part natives of Chili and Peru, and bear with us the character of half-hardy plants, suitable alike for enriching the appearance of either the greenhouse, conservatory, or open borders of the flower garden ; in fact, so numerous and varied have the species lately become, that fitting subjects for either or all these situations may be readily selected from among them, preserving at the same time the necessary difference in habit and general contour that should distinguish each position.

In a cultural view the genus may be divided into about three groups ; the first consisting of the slender growing tuberous rooted kinds, properly referred to in-door ornamental purposes, of which division our illustration may be taken as an example ; the second, composed of such as have tubers, and possess a more robust character, which extend themselves over a far greater space, and thus present most excellent forms for the embellishment of walls, arbours, and other out-door scenery ; and the third, containing the annual species, which, with a single exception, are regarded rather as culinary than ornamental plants.

The species of the first division may be enumerated as *T. Jarattii*, a native of Santiago, introduced in 1836 ; *T. brachyceras*, from Chili in 1830 ; *T. azureum*, from Chili in 1842 ;

*T. tuberosum*, from Valparaiso in 1828; and *T. polyphyllum*, from Chili in 1827. These require to be treated as greenhouse deciduous climbers, to be grown in a mixture of peat, loam, and rotten manure, in proportions of equal quantity with sufficient sand to maintain the proper porosity through the entire mass. The repotting should be performed when the plants first exhibit their protruding stems through the soil. A peculiarity worth mentioning is observed by cultivators to exist in a difference between the young bulbs and those of mature age: the former, for the sake of increasing the substance of the tuber, should be potted with a slight elevation, or, at least, level with the surface of the soil, while the established roots, from which a display of flowers is expected, require to be covered with an inch or two of the earth; this induces a vigorous growth, though without the visible benefit to the tuber so remarkable under the opposite treatment. The ordinary attention to watering, training, and an airy situation in the house, with a slight protection from the direct rays of the sun, is all that will be required, until the plants begin to decline in beauty, when a gradual reduction of the supply of water should take place until the plant is left for the winter, surrounded by a ball of perfectly dry earth,—a far better method of preserving them than by an entire removal from the pots. An upper shelf in the greenhouse is the best position for them till signs of returning action are observed, when the application of fresh earth and other stimuli should be repeated.

*T. edule*, introduced along with *Azureum* in 1842, from Chili; *T. tuberosum*, from Peru in 1836; *T. Moritzianum*, from Cumana in 1839; *T. Lobbianum*, from Columbia in 1840; and *T. (Chymocarpus) pentaphyllum*, form the second group. These require the protection of a greenhouse through winter, but from their larger size are unsuitable occupants (except for tall pillars or the roof) through the summer, but planted in a warm situation in the garden, as we before remarked, form splendid objects. A difficulty has been partially experienced to induce *T. tuberosum* to produce flowers. We saw it once flowering magnificently; it was then placed at the foot of a south wall, and growing in a loam of the strongest and most tenacious description; and again we have known it to produce blossoms when under the most opposite treatment. In the one case the plant was evidently *grown* into flower and produced them in a

natural manner ; by the other mode it was stinted into a blooming condition.

Of the third group only *T. aduncum (peregrinum)* is esteemed at the present day as a suitable ornament of the garden, and that is so well known, as to require no particular mention. Raised on a gentle heat, and planted in the manner of other annuals, it soon becomes a mass of blossom.—ED.

### HORTICULTURAL ESSAYS,

*By the Members of the Regent's Park Gardeners' Society.*

### CULTURE OF THE CAMELLIA.

By THOMAS STANFIELD.

*Camellia japonica*, introduced 1739, is an ornamental, evergreen shrub, which grows to the size of a low tree, with dark green ovate leaves on short petioles, with flowers, red, white, and variegated, single, semi-double, and double, without fragrance, but of great splendour, and particularly valuable as appearing in December, January, and February. The varieties now in cultivation are very numerous.

**PROPAGATION.**—The single Camellia is propagated by cuttings, layers, and seeds for stocks, and on these the other sorts are inarched, budded, or grafted. The cuttings are to be formed of the ripened shoots of the preceding summer, which are taken off in August, cut smoothly across at a joint, taking off two or three of the leaves ; the cuttings may then be planted in pans of sand and loam. Some cultivators use peat. The pans may be kept in a cold frame, but shaded during powerful sunshine, and in the following spring some will begin to push, when they may be placed in a gentle heat : in September following, the rooted plants will be fit to pot off, and in the second spring they may be used as stocks. A more speedy mode of obtaining stocks is by planting stools in a pit devoted to that purpose, and laying them in autumn : the following autumn most of the layers will have produced roots, when they may be taken off

and potted, and used as stocks the succeeding spring. Inarching or grafting is performed early in spring, when the plants begin to grow; the chief care requisite is to place the pot containing the stock so that it may not be disturbed during the connection of the scion with the parent plant: the graft being covered with moss to keep it moist, the mode called side grafting is generally used, but the operation of tongueing is usually omitted, as tending to weaken the stock. Seeds are sometimes obtained from the single red and semi-double; these require two years to come up, but make the best stocks.

SOIL.—Some grow the Camellia in peat; I should prefer a light loam, if convenient to the place: should it be a strong loam, mix a little peat and sand with it, for young plants especially. Plants grow most luxuriantly in a rich loam, but are most prolific of flower-buds in loam and peat. Camellias look the best, and are grown to most advantage, in a house entirely devoted to them. Such a house should be rather lofty, as the plants never look so well as when five or six feet high; the plants should be raised near to the glass, though some recommend a roof which will not admit much light, with glass in front only; others, a house facing the north: but my opinion is, that a light house facing the south, or, better still, glass on all sides, is essential to the perfect growth of the plants. To grow the Camellia to perfection considerable care is requisite; the roots are very apt to get matted in the pots, and by the space they occupy so to compress the ball of mould as after a time to render it impervious to water: hence frequent attention should be paid that the water poured on the pots moistens all the earth, and does not escape by the sides of the pot, moistening only the fibres. The same cause renders examining the roots and shifting, or reducing and repotting, a necessary measure once a year. When the Camellia has a house entirely devoted to its culture, they will not require to be removed to any other house, nor yet out of doors, providing the house is so constructed that it will admit of air freely, or shade if necessary. Such a house would be better without fire-heat, if possible, by covering, to keep out the frost, which is all the Camellia requires; but if fire-heat is quite necessary, every attention should be given to apply it as moderately as possible, not letting the thermometer vary. When the plants are in flower, and in a growing state, they require to be liberally watered, and also a

degree of heat somewhat more than is usually given to green-house plants, which may be obtained by keeping the house pretty close, and then they will expand their blossoms, and grow freely; but where a succession of flower is wanted during the winter, fire-heat is the only means through which it may be accomplished, and very successful results may be insured if attention is given to the proper regulation of the heat. I would recommend to begin in November with a heat of  $50^{\circ}$  or  $55^{\circ}$ , not letting the thermometer exceed  $60^{\circ}$  with sun heat: with this heat they will require a liberal supply of water, with syringing two or three times a week to refresh and keep the plants clean; but when the flowers begin to expand, refrain from syringing, damp the house night and morning to keep a moist heat; sprinkle the flues or pipes occasionally, when they are only warm, for, if done too hot, the steam will prove injurious. If the plants in flower have been removed to a show house or conservatory, and are off flower before the beginning of February, remove them to a cold house to make room for others in flower, and about the middle or beginning of February remove them into a stove or forcing-house, and force them to make their wood and flower-buds, for this is the best time for forcing the Camellia: they will stand a great heat at this season, providing they are liberally supplied with water; and I would recommend syringing at this time. When they have formed their flower-buds, remove them into a greenhouse, where they may have air freely to harden them off, and in a week or ten days, if the season is not too much advanced, remove them out of doors, there to remain till the beginning of September, which is late enough for the Camellia to remain out of doors, as they are likely to be injured with too much wet. At this time remove them into a house or structure of some kind, where they may have air freely supplied to them, and protection from heavy rains or bad weather; and then, at your leisure, you may replace them in their winter apartments. Small plants do remarkably well in pits, the walls banked up with earth and the glasses covered with litter, in the same way that *Ericas* are preserved during the winter. Where there is a bottom made for them, some sorts, such as the double white, red, striped, blush, and paeony flowered, answer very well when planted in the bed or border of a conservatory, provided the roof can be partly or wholly removed in summer, to admit

the full influence of the weather; where this cannot be done, the Camellia is better in portable utensils which admit both of examining the roots and placing in the open air, or in a greater heat, at pleasure. In placing the Camellia out of doors, if a bottom has not been made for their reception in a partially shaded situation, I would recommend foot tiles or inch boards to stand them upon, to prevent the worms working in the pots, as they are very destructive to the roots.

*April 10. 1845.*

## THE POLYANTHUS.

By Mr. J. ATKINS.

THIS beautiful and early spring flower has been much neglected of late by many of the London florists. It is a lover of pure air, for when planted in a genial soil and in a cool shady situation, having the morning sun to warm and enliven it, it thrives luxuriantly; and yet the ground should not be too damp or wet below, as I have found the roots are apt to canker. I am not aware that the Polyanthus is anywhere else so generally cultivated, or with greater success, than in Derbyshire, Lancashire, Nottinghamshire, and Yorkshire. There is hardly a garden in those counties that does not contain some fine varieties, more or less. Being one of the earliest flowers in spring, its appearance is greeted with a welcome every where.

Its two most prevailing colours are, a very dark reddish brown and a bright red or crimson hue, edged with yellow, a deep orange, or lemon colour.

As to its culture, it is found to succeed best in strong loam, and old rotten cow-dung and leaf mould, with a little river sand in proportion.

The common mode of propagating the Polyanthus is by dividing the roots in spring or in September. This should be done with the hand, for they are not very fond of the knife. As soon as they have done flowering in spring, they should be earthed up round the neck of the plants.

I prefer turning them out of their pots into the open ground after blooming, where they may remain until autumn; the roots may then be divided, and the plants re-potted; I mean those

only which are wanted for show flowers, those of inferior qualities are best in the ground altogether. I have seen them succeed well by leaving the plants in the ground till March, when they are taken up and potted, and I have thought the trusses of the flowers have been stronger than those wintered in frames, though I still think it advisable to cover them over in winter from the frost and snow.

## THE CULTURE OF THE COCKSCOMB.

By Mr. D. WATT.

As I have for some years cultivated this truly beautiful plant with good success, I beg leave to offer a few remarks on the mode of treatment I subjected my plants to. I make the first sowing of them in February, and a successional one about the beginning of May. The soil I use is a mixture of very rich loam, leaf mould, and well decayed manure, about equal parts of each. The seeds are covered nearly half an inch deep with the same sort of mould finely sifted, made smooth, pressed gently down, and then watered. They are, when the first rough leaf appears, potted off singly into small 60-sized pots, covering about half of the stem; they are gently watered, and placed on a hotbed in a temperature ranging from 65° to 70° during the day and 55° during the night. As soon as the roots reach the sides of the pot, shift them into the next larger size, using the same compost; again place them in the frame, using liquid manure at their roots once a week; by which I find them very much benefited. They are shifted again as soon as they require it, not on any account allowing the roots to get entangled with each other, for that would be the means of checking their growth. My plants are thus treated, shifting them at intervals, and keeping them in the frame as long as possible, as they will thrive better there than elsewhere. If a frame can conveniently be spared on purpose for them, it is the better way, for when grown in melon or cucumber pits they cause an inconvenience in attending to the other plants, consequently they have not the care nor attention bestowed upon them that they deserve. If treated as directed above, they will require pots ten to twelve inches diameter, and if the combs are

of a good kind they will measure the longest way twenty, twenty-two, and some twenty-four inches across. When the plants have attained their full growth, or nearly so, they are then removed to the greenhouse, and placed among the other plants, where they present a truly pleasing appearance.

## GLOSSARY OF TERMS USED IN BOTANICAL DESCRIPTIONS.

(Continued from p. 122.)

**ALEXITERIC.** An antidote, possessing the power of removing the effects of poisons.

**ALKALI.** Any substance which, on the application of acid, produces fermentation.

**ALKALESCENT.** Of the nature of an alkali.

**ALLIACEOUS.** A family of plants, of which garlic is the type.

**ALLOCHROUS.** Changing from one colour to another.

**ALPINE.** Applied to plants which inhabit the tops of mountains.

**ALTERNATE.** When the leaflets of a plant are placed one above another, on opposite sides, in an irregular manner.

**ALTERNATELY-PINNATE.** A slight deviation from the regular pinnate leaf.

**ALVEOLATE.** Composed, as it were, of cavities like those of the honeycomb.

**AMENT, AMENTUM.** A mode of inflorescence; a catkin.

**AMMOPHILUS.** The spontaneous vegetation of a sandy soil.

**AMORPHOUS.** An undefined uncertain form.

**AMPHICARPIK.** Bearing fruit of different forms, or which ripens at various seasons.

**AMPLEXICAULE.** Stem clasping, applied when the base of the leaf extends partially round and embraces the stem.

**AMPLECTANS, AMPLECTIVUS.** Clasping.

**AMPULLA.** A bladder.

**AMPULLACEUS, AMPULLÆFORMIS.** Swollen out in the middle, like a bottle.

**AMYLACEOUS.** Of a fesculous or starchy nature.

**ANANDRARIUS.** When the stamens have become extended into petals, so as to form a double flower.

**ANASARCA.** A diseased condition of plants, resembling that of dropsical subjects.

**ANASTOMOSING.** Running one into another; the reticulations observed in many leaves are anastomose veins.

**ANCIPITAL.** A compressed stem, presenting two more or less acute edges.

**ANDROCÆUM.** The aggregate of stamens, as corolla is that of the petals.

**ANFRACTOUS.** Spirally twisted; full of turnings.

**ANGULAR.** Presenting a determinate number of angles.

**ANGULINERVED.** When the veins of a leaf branch off at right angles.

**ANGULO-DENTATE.** Angularly toothed, or angular and toothed.

**ANGUSTIFOLIUS.** Narrow leaved, the width of the leaf being proportionally much less than its length.

**ANISOPETALUS.** When a flower is composed of irregularly-sized petals.

**ANNEXUS.** Adnate.

**ANNUAL.** Applied to plants which arrive at perfection and die within the year.

**ANNULATIONS.** Rings or circles.

**ANTERIOR.** In botany refers chiefly to position; growing in front of some other organ.

**ANTHELMIRATIC.** Having the property of destroying worms.

**ANTHER.** The upper portion of the stamen which contains the pollen; a terminal anther is attached to the filament by its base, while a horizontal anther is united by the middle of its back.

**ANTRORSUM.** Turning upwards; having an inclination towards the summit of some part.

**APERTUS.** Bare, naked.

**APEX.** The summit; the opposite point of an organ to that by which it is attached.

**APICILLARY.** Relating to or growing upon the summit of another organ.

**APICULUS.** Expressive of the short sharp point, formed when the midrib projects beyond the leaf, or when a small point is abruptly formed.

**APICULATE.** Furnished with an apicula.

**APOPHYYSIS.** An irregularly swollen surface.

**APPENSE.** An approach to pendulous.

**APPRESSED.** Inclining closely to the surface of something else; the pubescence which lies close to the leaves, or the stems of trailing plants, are said to be appressed.

**APPROXIMATE.** Approaching closely, but not united.

**APTEROUS.** Without the membranous margins found on some petioles which are called wings.

**APYRENUS.** Seedless fruit, as some varieties of the orange, &c.

**AQUATICS.** Applied to all plants which grow in or under water.

**AQUEOUS.** Belonging to or resembling water.

**ARACHNOID.** Covered with very soft pubescence like velvet.

**ARANEUS.** Composed of soft downy fibres.

**ARBORESCENT.** Assuming the size or form of a tree.

**ARBOREUS.** A tree, as distinguished from frutescent or shrubby.

**ARBUSCULA.** A small tree-like shrub, as some heaths, &c.

**ARCUATUS.** Curved so as to form a large arc.

**AREOLÆ.** Small cells or cavities, distinctly separate.

**ARGENTEUS.** Silvery, grey with a metallic tinge.

**ARID.** Extremely dry.

**ARILLUS.** An expansion of the funicular chord adhering to the hilum of seeds, and sometimes covering them in the form of an integument. The mace of commerce is the arillus of the nutmeg.

**ARISTA.** An awn.

**ARISTATE.** Bearded like an ear of corn.

**ARISTULATUS.** Armed with small aristas or bristles.

**ARMATA.** Furnished with bristles, thorns, &c.

**ARMENIACUS.** Of the colour of an apricot.

**AROMATIC.** Possessing the scent or quality of spice.

**ARTICULATION.** The place at which a leaf or branch joins the parent stem.

**ASCENDING.** Applied to a branch which at first proceeds in a horizontal direction and afterwards becomes vertical.

**ASCI.** Small tubes which contain the sporules or seeds of cryptogamic plants.

**ASCIDIUM.** An extension or appendage to certain leaves, usually termed a pitcher.

**ASSIMILATION.** The act of converting nutritious matter into the component matter of the receiving body.

**ASSURGENT.** Synonyme for ascending.

**ATER.** Black (in composition *ATRO*).

**ATTENUATED.** Becoming gradually slender at either end.

**AUCTUS.** An extra or superadded part, usually evinced in the form of bracteal scales.

**AURANTIA, AURANTIACUS.** Of the colour of an orange.

**AURATUS, AURENS.** Of a bright golden colour.

**AURICULATE.** Having a rounded or ear-like base.

**AUSTRALIS.** Applied to plants which are natives of warm climates in the southern hemisphere.

**AVENACEOUS.** Resembling oats.

**AVENIUS.** Without veins.

**AVERSUS.** Turned or rolled back.

**AWN.** The stiff bristly appendage or beard of corn, and other graminæ.

**AXIL, AXILLA.** The upper angle formed by the union of the leaf or branch and the stem.

**AXILLARY.** Proceeding from the axil.

**AZURE, AZUREUS.** A lively sky blue.

## LIST OF NEW PLANTS.

### PITTOSPORACEÆ. — *Pentandria Monogynia*.

*Pronaya elegans.* This elegant little greenhouse plant bears some resemblance, in its general aspect, to the *Marianthus caeruleo-punctatus*. It is a smooth twining plant, but of a less tenuous or rambling growth, producing its leaves at shorter intervals, and having the flowers more compactly aggregated. In healthy plants the latter are plenteously developed, and have a peculiarly neat and attractive mien: from this dwarfness of habit, and the pleasing and long lasting inflorescence, it makes one of the most desirable of plants for a small greenhouse. It is mentioned under the name of *Campanthera Fraseri* in the "Icones Plantarum" of Sir W. J. Hooker; but the name we have adopted is that bestowed by Hugel, and under which alone we believe it is known in the gardens of this country. It is a product of the western coast of New Holland, and was first discovered by Mr. Fraser growing plentifully about the Swan River settlement, whence it was forwarded to England in 1837. — *Pax. Mag. Bot.*

### COMBRETACEÆ. — *Octo-Decandria Monogynia*.

*Combretum latifolium.* An East Indian species, but at what precise period it was introduced to England we are not informed. It is evidently identical with the *C. latifolium* of Don in the "Linnean Transactions" and the *C. macrophyllum* of Roxburgh in the "Hortus Bengalensis." In the general appearance of the inflorescence there is a striking resemblance between this species and *C. grandiflorum*, but a comparison of the two reveals several essential distinctions; the flower spikes of the present kind are shorter and broader in proportion to their length, the stamens moreover

are not so long, and the plant is altogether of a much stouter habit, and is remarkable for the large size of the foliage. — *Pax. Mag. Bot.*

**CACTÆ** — *Icosandria Monogynia*.

*Echinocactus oxygonus*. Scarcely any plant possesses more noble or more lovely blossoms than the present, and they are the more striking from the circumstance of their being produced from so graceless and small a trunk. Our specimens are from seven to ten inches in height, subglobose, but generally a little longer than broad; green, slightly inclining to glaucous; there are from thirteen to fifteen deep furrows with the *Areola* about three-fourths of an inch apart, sunk, as it were, in the upper edge of each lobe. It is from the areole of some of the upper lobes that the flowers spring, a span or more long, often longer than the plant itself; the tube is trumpet-shaped, greenish, with many red-brown, villous, appressed scales, which gradually become longer and larger upwards, and pass into deep rose-coloured calycine segments, and these again into the oblong pale rose-coloured petals; the stamens are pale straw-colour, and very copious. — *Bot. Mag.* 4162.

**ERICACEÆ**. — *Decandria Monogynia*.

*Arctostaphylos nitida*. Mr. Hartweg found this shrub in Mexico on the mountains called Carmen. The existence of the plant in our collections is owing to G. F. Dickson, Esq., who obtained seeds of it from Mexico for the Horticultural Society, in whose gardens it flowered in May, 1844. It forms a handsome evergreen shrub five or six feet high, bearing a profusion of pure white arbutus-like flowers, and is capable of enduring a mild winter in the open border. — *Bot. Reg.* 32-45.

**ROSACEÆ**. — *Icosandria Pentagynia*.

*Spirea Lindleyana*. The sorb-leaved spirea is well known as an inhabitant of shrubberies. The species now figured is very like it, differing chiefly in its greater stature and more numerous leaflets, which have a long taper point, and a distinctly ovate outline, while those of *S. sorbifolia* are nearly oval. It is a native of the Himalayas, and forms a fine tall shrub, growing freely along with similar plants, and flowering abundantly from July to September. During three winters it bore the cold without suffering, but the late winter killed it as far as the ground, from which, however, it is again shooting up. — *Bot. Reg.* 33-45.

**ORCHIDACEÆ**. — *Gynandria Monandria*.

*Dendrobium Kingianum*. For its introduction we are indebted to Mr. Bidwill, who obtained specimens two or three years ago in New Holland. In this species we are presented with the same character which has been previously noticed in other New Holland kinds, of a pseudo-bulbous stem, crowned with a few leathery leaves, and elongating in the form of a spike of flowers, a familiar instance of which is afforded in *D. speciosum*. Our plant however is by no means possessed of the huge size and stoutness for which *D. speciosum* is remarkable; on the contrary, it is comparatively rather diminutive, the pseudo-bulbs seldom exceeding a few inches in length. On Messrs. Loddiges' plants they form an extremely crowded mass, and appear as if they had been squeezed together; this enables the flowers, which are rather loosely arranged, and only a few on each spike, to make a more showy appearance than might be imagined from an individual pseudo-bulb; the lively markings of the lip are particularly engaging. — *Pax. Mag. Bot.*

*Schomburgkia tibicinis var. grandiflora*. This splendid variety differs from the original species in having very much larger flowers, which are far paler

on the outside, and have a broader lip, whose middle lobe is not rich violet, but yellow, with a white or purple border. It flowered in the collection of Robert Hanbury, Esq., in May, 1844.—*Bot. Reg.* 34-45.

*Lycaete gigantea.* Although the colours of this species are not gay, yet its large size, and the great height to which its flower-stem rises (full two feet) are remarkable features. Mr. Hartweg found it in Guayaquil flowering in the month of August, at a place called the Quebrada de las Juntas. The flowers are larger than those of *L. macrophylla*, the sepals and petals of a dull brownish-green, with a spreading chocolate-coloured labelum.—*Bot. Reg.* 34-45.

*Eria Dillwynii.* A new species, with tall oblong pseudo-bulbs, producing a raceme six to eight inches long, of cream-coloured flowers, not remarkable for beauty. It is from the Phillipine Islands, whence it was received by Dillwyn Llewelyn, Esq., of Penleegar, through Mr. Cuming, in whose collection it blossomed freely in March, 1843. It is valuable from the great facility with which it submits to cultivation, and the profusion with which it bears its flowers.—*Bot. Mag.* 4163.

*Masdevallia fenestrata.* This is one of the very curious productions of nature, of which there are such frequent instances in the Orchideous plants. The plant is not only singular in colour, the flowers being externally of a deep blackish blood-colour, but still more singular in form, with the sepals united below and at the apex, leaving a small space much below the apex, which is open and window-like; the whole representing the head of a bird, with a perforation where the eyes should be. It was sent from Jamaica by Mr. Purdie, and flowered at Kew in October, 1844.—*Bot. Mag.* 4164.

## LITERARY NOTICE.

THE CULTIVATION OF ORCHIDACEOUS PLANTS, by J. HENSHALL. (*Second Notice.*) Last month we promised to give a specimen of this work, and we are now more than ever disposed to do so, because since our notice it has been made the subject of some most severe, illiberal, and unjust remarks in the “Gardener’s Chronicle.” The writer of the review in question commences in his usual style with a most insulting reflection on gardeners generally, as though *he* was independent of their influence or exertions, and proceeds with an attempt to throw ridicule on the work, by picking out a line here and there — a sentence from the middle of a page, without the connecting link of the observation to which it refers, leaving the context, and indeed the whole body of the book, completely unnoticed. However, we intend the author shall speak for himself. In the geographical portion of the work, we find the following, and beg to inquire of the learned reviewer how much “absurdity” he discovers therein. After giving a rule for the estimation of the mean temperature in all latitudes, Mr. Henshall says, “Although in the present

instance, we have only to treat of tropical plants, and therefore need not extend our remarks beyond the latitudes in which they are found; it may be well to mention another important matter connected with their geographical distribution, affecting their cultivation most materially; this is the difference which exists in the state of the atmosphere at different altitudes. The effect of elevation is to cause a reduction of temperature and rarefaction of the surrounding air; the latter produces an increase in the intensity of light, and, of necessity, a corresponding decrease of humidity. Now, though Orchidaceous plants inhabit only those places where moisture is prevalent, at least for a season, and consequently are seldom found at very considerable elevations, still a degree of difference is observable among them of sufficient extent to render attention to these circumstances absolute and indispensable."

Then, again, in Sect. 2., treating of the benefit of two or more houses, the following passage occurs, — the "absurdity" of which we confess to have been unable to find. "Orchidaceous plants, being natives of tropical regions, require, in their cultivation, what is technically termed a seasonal treatment; that is, a period of active growth, and one of decided rest; during the former, which agrees with the rainy season of the country of which the plant is properly an inhabitant, every stimulative means that the cultivator possesses should be applied to the encouragement of a vigorous and full development of the several increasing parts of the plants; and after the completion of this seasonal growth, the period of dormancy or rest should be brought on gradually, when all excitement must cease, in order to give full maturity to the newly-developed organs. Now, as it happens that Orchidaceous plants are obtained from many and various climates and seasons, it is not reasonable to expect, when we take the force of natural habit into consideration, that they will, all of them, begin to grow at one and the same period, bloom at the same time, or rest altogether at one season; not even if we endeavour to assimilate these seasons to those of our own climate; there will always be a number of them, in a collection of the least pretensions, that will be springing into activity, and requiring excessive moisture, and other stimulants; while another portion will be speedily advancing to maturity, and consequently demanding for their future welfare quite a contrary treatment; and a third

will assume an intermediate station, in which flowers are produced, the brilliancy and duration of which are materially diminished when continued in an aqueous atmosphere.

“ Then, again, there is the great difference which exists between the climate of India and that of Mexico, and the largest portion of South America, to be considered ; it would be but wasteful economy to grow the plants from each of these places together, as the temperature necessary for the Indian species would be more than sufficient for those from Mexico, in fact it would be injurious. But if two houses are maintained for them, every plant may be allowed its proper treatment without disparagement to its fellows ; thus the structure devoted to Indian kinds being kept at a higher temperature, and with more moisture than the American house, the plants of the former may be rested in the latter, while, should it happen that any of the inhabitants of the cooler one begin to grow in winter, or before the time usual for increasing the application of warmth and moisture, they may be removed to the hotter house, where the necessary stimuli will be in waiting for them.”

In the “ Chronicle ” review, allusion is made to the grouping of the genera in the directions for culture, and a distorted idea given that it was intended to be a scientific arrangement : at Chap. IV. we find the genera *Broughtonia*, *Aganisia*, *Comparamettia*, and *Angraecum* thrown together, and the following explanatory note : — “ In classing several genera together, I am actuated by a desire to condense my remarks as much as possible, because the plants thus placed together require the same treatment, and therefore need no separate notice.” That there are peculiarities of expression which distinguish many writers, and some of them not much to be admired, we readily admit ; yet we hold a book may be of first-rate utility, without pretending to be a literary gem ; and when practical information alone is aimed at, the production should be judged, as the information conveyed shall be good or otherwise. Nothing of the sort is attempted in the review of the “ Chronicle ” — but merely a quibble about punctuation, or matters of a similar import. From such “ cant of criticism ” defend us !

## FLORAL INTELLIGENCE.

## HORTICULTURAL SOCIETY OF LONDON.

THIS Society's first exhibition for the season took place on Saturday May 24th, at their Gardens, Chiswick. The number of plants present was much greater than last year; and were certainly a matchless instance of what good cultivation will effect. In the large collection of forty stove and greenhouse plants, the principal competitors were Mr. Robertson, gardener to Mrs. Lawrence, of Ealing Park; and Mr. Barnes, gardener to G. W. Norman, Esq., of Bromley. The large gold medal was awarded to Mr. Robertson. Our limits not allowing a full enumeration of the plants, we must therefore only notice the best in each collection: the first contained large plants of *Acacia alata* and *Cytisus racemosus*, with *Azalea indica alba* and *A. ind. phœnica*, *Chorozema varium* and *C. cordatum*, *Cytisus filipes*, *Eriostemon myoporoides* and *E. buxifolium*. A fine plant of *Azalea indica lateritia* and *A. sinensis*, with *Pimelea spectabilis*: in addition to these was *Erica propendens*, *Pentas carnea*, *Leschenaultia formosa*, *Aphelexis sesamoides* and *Tabernemontana coronaria flore pleno*. Mr. Barnes's collection contained, among many other remarkably well-grown plants, *Aphelexis humilis*, *A. sesamoides*, and another called *A. macrantha purpurea*, the finest of the genus; *Phœnecoma prolifera*, *Dillwynia ericifolia*, *Pimelea Hendersonii* in fine bloom, and *Gompholobium tenellum*. Of *Ericas* there were *E. Thunbergii*, *E. Hartnellii*, a splendid plant, and *E. daphnæflora*, a fine plant of *Luxemburgia ciliosa*; and in addition to the preceding was a fine plant of *Ixora grandiflora*, and also beautiful small plants of *Azalea indica Gladstonesii* and *Podolobium trilobatum*. Mr. Green, gardener to Sir E. Antrobus, contributed a third collection; among them was a well-coloured *Pimelea decussata*; also *Coleonema pulchrum*, and some fine *Azaleas*, well flowered.

In the collections of twenty stove and greenhouse plants, the competitors were Messrs. Frazer, of Lea Bridge Road; Mr. Hunt, gardener to Miss Traill, Bromley; and Mr. Ayres, gardener to J. Cook, Esq. The collection of Messrs. Frazer contained *Chorozema varium*; *Boronia pinnata*, *Podolobium staurophyllum*, a dense bush; a neat plant of *Erica propendens*; and *E. campanulata*, very fine; *Pimelea linifolia*, and *P. nivea*, neat. In Mr. Hunt's collection was a noble plant of *Gompholobium polymorphum*, an immense bush of *Erica gemmifera*, and *E. perspicua nana*, *Boronia serrulata*, and several *Azaleas*. In Mr. Ayres's collection the plants were small, but well-grown; among them was a fine specimen of *Pimelea spectabilis*; *Azalea ind. alba*, very fine; *Poivrea coccinea*, with several spikes of rich flowers; a fine plant of *Ixora grandiflora*, *Chorozema angustifolia*, the sweet-scented *Gardenia radicans*, and *Gardoquia Hookerii*. In the collection of twelve plants, Mr. Bruce, gardener to B. Miller, Esq., of Mitcham, was first: he had finely-bloomed plants of *Azalea Gladstonesii* and *variegata*; *Aphelexis humilis* and *sesamoides*, very fine; *Adenandra speciosa*, very pretty; with *Pimelea spectabilis*, and a tall *Ixora coccinea*. Mr. Pawley, of Bromley, contributed to this class *Azalea phœnica*, very fine; *Coleonema rubrum*; with plants of *Erica perspicua nana* and *E. ventricosa stellata*. Mr. W. T. Epps, of Bower Nursery, Maidstone, sent a collection, among which was *Erica Hartnellii*, *Azalea indica alba*, and a large specimen of *Podolobium Chorozemæfolum*. There were six competitors in the class of six plants, mostly from new exhibitors. Mr. May, gardener to E. Goodhart, Esq., contributed a fine *Ixora grandiflora*, *Hovea celsi*, *Polygala acuminata*, and a fine specimen of *Erica mundula*. Mr. Cole, gardener to C. Lewis, Esq.,

Blackheath Park, sent a fine *Pimelea spectabilis*, with very large heads of flowers; *Epacris grandiflora*, and *Correa speciosa major*. Mr. Stanley, gardener to H. Berens, Esq., Sidcup, had a well-grown plant of *Leschenaultia formosa*, *Tropaeolum grandiflorum*, a species of *Tropaeolum* from Peru, *Gompholobium polymorphum*, and *Azalea indica alba*. Mr. Jack, gardener to G. H. Loraine, Esq., contributed a fine *Gesneria zebrina* in good bloom, *Azalea Gladstonesii*, and very fine plants of *Bossiaea linifolia* and *Aphelexis humilis*. Mr. Glendinning contributed *Pimelea spectabilis* with large heads of bloom, *Boronia pinnata*, and a large plant of *Erica rubro-calyx*. Mr. Taylor, gardener to J. Coster, Esq., of Streatham, was also a contributor to this class.

The collections of Orchidaceæ were very numerous, but not so rich in fine specimens as in May 1844; we must except, however, the single specimen of *Saccolabium guttatum*, sent by Mr. Rae, gardener to T. J. Blandy, Esq., of High Grove, near Reading, which is the finest specimen of the kind ever seen, and the most remarkable feature of the exhibition: it had nineteen spikes of flowers fully expanded. Mr. Basset, gardener to R. S. Holford, Esq., contributed a beautiful plant of *Aerides odoratum*, with twenty-seven flower spikes; Mr. Green, a *Dendrobium pulchellum*, an entire mass of flowers; and Messrs. Booth, of Flötbeck Nurseries, Hamburgh, sent a small plant of *Odontoglossum cordatum*. From Mr. Cameron, of the Birmingham Botanical Garden, was a rare plant blooming for the first time in this country, of *Chloræa chrysanthæ*, from the hills of Chili; the flowers are of a very rich bright yellow, the habit of an European Orchis. In the large collection sent by Mr. Mylam, gardener to S. Rucker, Esq., was a fine *Sobralia macrantha*, with several of its handsome flowers fully expanded; also *Chysis bractescens*, *Vanda teres*, *Odontoglossum citrosum*, *Anguloa Clowesii*, *Coryanthus macrantha*, *Acanthophyllum bicolor*, *Saccolabium guttatum* with two spikes of flowers, *S. præmorsum*, *Dendrobium densiflorum*, *Oncidium pulchellum*, *Cattleya Mossiæ*, *Bifrenaria tyrianthina*, *Cymbidium lancifolium*, *Oncidium pumilum*, *O. leucocochilum*, *Lycaste Deppii*, *Stenia pallida*, and *Epidendrum macrochilum*. From Mr. Robertson, gardener to Mrs. Lawrence, *Dendrobium Cambridgeanum*, *D. densiflorum*, *Saccolabium guttatum* and *præmorsum*, with several spikes of flowers; *Epidendrum bicornutum*, *E. vitellinum*, and *Bifrenaria tyrianthina*. Messrs. Rollisson, of Tooting Nursery, sent the curious *Trichopilia tortilis*, *Cattleya Mossiæ*, *Acineta Barkerii*, *Lycaste Deppii*, *L. aromatica*, and *Maxillaria vitellina*, *Aerides crispum*, *Cælogynæ undulata*, with small flowers, much like the Lily of the Valley, *Brassia maculata*, and *Maxillaria tenuifolia*. In the collection of twelve Orchidaceæ, the competitors were Mr. Don, gardener to F. G. Cox, Esq., of Stockwell, and Mr. Williams, gardener to C. B. Warner, Esq., of Hoddesdon. In Mr. Don's collection we noticed three small but fine plants of *Aerides crispum*, *A. crispum pallidum*, *Brassia maculata*, a new species of *Oncidium*, resembling *O. papilio*, but with the lip beautifully fringed; *Lycaste Deppii*, *Bifrenaria aureofulva*, and *Acineta Barkerii*. Mr. Williams produced *Dendrobium cærulescens*, *D. moschatum*, *Cattleya* species, fine; *Epidendrum macrochilum*, *E. variegatum*, and *Aerides crispum*: in the same group were small plants of *Maxillaria tenuifolia*, *Zygopetalum rostratum*, and *Stanhopea saccata*. Messrs. Veitch and Son exhibited in the collections of six Orchidaceæ a group consisting of *Dendrobium Calccolaria*, *Cattleya Mossiæ*, very fine; *Oncidium ampliatum majus*, and *Odontoglossum hastatum*, and two others. Mr. Eyles, gardener to Sir George Larpent, sent *Vanda Roxburghi cærulea*, *Camarotis purpurea*, *Oncidium altissimum*, *O. luridum*, and *Cattleya Mossiæ*. Mr. Plant, gardener to J. H. Schröder, Esq., of Stratford, produced *Dendrobium densiflorum*, *Trichopilia tortilis*, *Vanda cristata*, very pretty; *Cattleya Skinnerii*, and *Calanthe veratrifolia*. Mr. Hunt produced an *Oncidium* from Honduras, with curious dark brown variegated flowers; *O. luridum*, and *Cymbidium aloifolium*. The Azaleas

were very fine, consisting of several collections. From Mr. Green was *Azalea indica pallida*, lilac; *A. Gladstonesii*, *A. Rawsonii*, and *speciosissima*. From Mr. Falconer, gardener to A. Palmer, Esq., of Cheam, *Danielsiana*, fine; Double red, *Bianca*, a fine white; *Agnes*, *Theresa*, and *Emmelina*. Mr. Robertson sent *pluēnica*, *splendens*, and *pulchra*, *conspicua purpurea*, and *leucomegista*, a very fine white. Mr. Gains, of Battersea, had also a large collection. Mr. Smith, of Norbiton, sent *Edmondsii* and *modesta*. A small collection was also sent from Lea Bridge Nursery. Messrs. Knight and Perry sent *A. exquisita*, a beautiful new kind, spotted with rosy purple, on a light ground.

Collections of Cacti were present from Mr. Green and Mr. Bruce; in Mr. Green's collection were *Epiphyllum Ackermannii grandiflorum*, and *E. coccineum cœruleum*. In Mr. Bruce's collection was a fine plant of *E. speciosum*. In Heaths the exhibition was fine; some of the plants were very large. Mr. Robertson sent a fine *E. Cavendishii*, *Humeana*, pretty; *Westphalingia*, and several varieties of *ventricosa*. From Mr. May were *E. Humeana*, very fine; *Hartnettii*, and *Sprengelii*. In the Nurserymen's class, a collection of twenty plants was sent by Messrs. Fairburn, of Clapham, containing *E. Cavendishii*, *E. ampulacea*, *E. tricolor*, *E. vestita coccinea*, *vestita alba*, and *E. ventricosa carneae*, v. *alba*, and also v. *coccinea minor*. From Messrs. Rollisson some promising specimens of *E. mundula*; *dilecta*, good; *Humeana*, and *Beaumontiana*, with *propendens* and *fragrans*. Mr. Pawley also sent twenty Heaths; among them was a fine *Cavendishii*, *perspicua nana*, and *Halicacaba*. In the collection of twelve plants sent by Mr. Hunt were *Sprengelii*, *suaveolens*, *odora rosa*, and *sulphurea*. That from Mr. Plumbley, gardener to C. F. Dimsdale, Esq., contained a splendid specimen of *E. depressa*, with *mirabilis* and *perspicua*, good. Messrs. Veitch and Son sent good plants of *E. Alberti*, *vestita coccinea*, *Clowesiana*, and several others, remarkably good. Messrs. Frazer sent a dozen kinds; among them were *fastigiata lutescens*, and *Bergiana*, fine. Mr. Barnes sent *elegans*, *dilecta*, and *mundula*. Mr. Bruce contributed fine plants of *Cavendishii*, *princeps*, and *fastigiata*.

From Mr. Jack were fine plants of *suaveolens*, *vestita*, *perspicua*, and *sulphurea*. Mr. Taylor sent some fine plants; and Mr. Dawson of Brixton also, Mr. Robertson sent a large *E. propendens*; Mr. Curtis, gardener to T. Allnutt, Esq., of Clapham, a smaller plant of the same species; Mr. Plumbley, a very good *suaveolens*; Mr. Dawson, a very good *mundula*; Messrs. Rollisson, a handsomely-bloomed *Sprengelii*. Of Rhododendrons Mr. Smith sent a splendid collection of eleven yellow varieties of a strong growth, and large trusses of blossoms; the finest of them were *R. Burlingtonium aureum*, a lemon colour with dark orange spots; *flavum superbum*, nearly of the same colour; *ornatum*, same colour, tipped with rose; and several others. Of single specimens of superior growth a great number of plants were exhibited. From Mr. Falconer was a noble *Azalea indica variegata*; from Messrs. Veitch, *Eriostemon buxifolium*; Mr. Robertson, a *Gastrolobium spinosum*; from Mr. Beck, a fine specimen of *Achimenes picta*; Mr. Bruce, *Ixora grandiflora*; and Mr. Jack, *Clerodendron infortunatum*. New plants were not numerous, nor very remarkable. A new species of *Siphocampylus* with bright red flowers was sent by Messrs. Veitch, who also sent *Franciscea Pohliana*; from Mr. Robertson, *Daviesia cordifolia*, a pretty flower, but straggling habit.

In the collections of Creepers Mr. Pawley produced *Stephanotis floribunda*; Messrs. Frazer, *Hardenbergia longi-racemosa*; and Mr. Robertson, *Gompholobium polymorphum*. The Roses in pots attracted great attention. Mr. Beck's collection contained some fine specimens. *Nemesis*, fine rose; *Belle Allemande*, large creamy yellow; *Caroline*, light blush. Mr. Sloane, gardener to W. R. Baker, Esq., sent *Bougere*, *Safrano*, and *Romaine*, white with yellow centre; Mr. Lane, of Berkhamstead, sent twenty-five varieties, in good bloom; from Mr. Ayres was a cut specimen of *Noisette Cloth of Gold*, a

remarkably fragrant rose, of large size and fine substance; the yellow is not so deep as was generally anticipated.

The Pelargoniums were not so forward this season as the last, on account of the backwardness of the spring season; yet the display was grand, and of superior cultivation. For collections of twelve new and first-rate varieties, the Gold Banksian Medal was awarded to J. Dobson, gardener to Mr. E. Beck, of Isleworth; contained Foster's Sir Robert Peel, Sultana, Pulchellum, Conflagration, and several others. Mr. Cock gained the large Silver-gilt Medal for Madeline, Angelica, Cyrus, Wizard, and several others. In the Nurserymen's class, Mr. Gaines had no competitor; received the Gold Banksian Medal. For collections of twelve varieties the Gold Banksian Medal in the Amateurs' class was awarded to Mr. Staines, for twelve finely-grown sorts. In the Nurserymen's class, Messrs. C. and D. Smith, of Pimlico, obtained the Gold Banksian Medal for Grand Duke, Coronation, Lady Sale, and several others. To Mr. Gaines a large Silver-gilt Medal for Cotherstone, Queen of Beauties, Pilot, Akbar, and several others. For six varieties, Mr. Gaines received the large Silver Medal; this collection contained large specimens of Nymph, Lady Sale, Albina, and Juba. In Calceolarias there was a decided improvement, both in the sorts and their growth. The large Silver Medal was awarded to Mr. Kinghorn, gardener to G. A. Murray, Esq., Twickenham, for Grandis, Marquis of Bute, Vesta, Mary, Queen of Scots, and others. The Silver Knightian to Mr. G. Stanley, gardener to H. Berens, Esq., for Lane's Monarch, Fairy Queen, and others. Mr. Gaines, in the Nurserymen's class, received the large Silver Medal, for Standishii, Vivid, Napoleon, and Conductor, &c.

For Cinerarias, in twelve distinct varieties, Mr. Ivry, of Peckam, obtained the Silver Knightian Medal, for Nosegay, Wee Pet, Regina, Red Rover, and others. Mr. Lane received the Silver Banksian Medal for Regina Victoria, Enchantress, Eclipse, and others. A Certificate was awarded to Mr. Taylor.

Seedlings Pelargoniums of 1844, the following received Banksian Medals: — Rosy Circle, a good-shaped flower, with the lower petals large and broad, of a rosy pink, centre nearly white, top petals rich, with the dark blotch softening to the edge, and terminating in the centre without the feather, and a free bloomer. Arabella, good-sized flower with a white centre, the lower petals terminating with a rosy colour, the upper petals having a large dark spot gradually softening towards the edge; a clear and showy variety: both from Mr. Beck. The Pearl, Catleugh, white, possessing the colours of Una, with a flower of good shape. Among the Seedlings of the present year two were selected, and certificates awarded; they were from Mr. Hoyle, of Jersey: Mount Etna was one, and Isabella the other. In Calceolarias, Mr. Kinghorn showed the best, Exemplar, a rich mulberry-colour ground with small bright yellow markings. In Cinerarias, a Certificate was awarded to Messrs. Smith, of Pimlico, for one named Smithii, a bright rosy purple.

## CALENDAR FOR JULY.

To the collector of British plants this will be a busy month, especially among those where an examination of the seed and seed-vessel is necessary to a proper appreciation of their characters and affinities. Such an investigation, highly necessary in all cases, particularly where the natural arrangement of plants is studied, is indispensable in the larger groups of our native Flora; for instance, in Cruciferæ, Umbelliferæ, Compositæ,

Cyperaceæ, &c., among the natural orders; and again in *Euphorbia*, *Potamogeton*, and many other genera. For such observations the time has now arrived, and will afford an endless source of amusement to the student. Nor is this all: the numerous series of changes in the seed-vessel and its appendages are highly interesting; as, for instance, the alteration, in various ways, in the calyx of the Clovers and other leguminous plants; the singular and beautiful forms assumed by the down, or calyx, in *Compositæ*; the bursting of the pod, as in the Furze and Violet, &c. Indeed, the general observation of the various and highly effective ways provided for the dispersion of seeds, is one of the most attractive pages in the study of Botany.

In the flower-garden the most gorgeous time is fast approaching. The beds being permanently filled for the summer, the utmost attention must be paid to neatness and high-keeping, without which the best selection of plants will look weedy and poor. But if keeping is all that is necessary in the flower-garden itself, not a moment should be lost in propagating for another season. To this end cuttings should be continually put in, biennial and perennial seeds sown, and all double-flowering plants of similar habits, as *Rockets*, *Wallflowers*, &c., propagated by cuttings, as the best means to preserve them from degenerating. Now also is the time to see the effect of any arrangement of colours adhered to in the planting, and to note any desirable alterations for another season.

Greenhouse plants, wherever placed, should be regularly looked to as regards air, shading, watering, and more particularly training, as no after pruning, tying in, or other resource, will be found so effective in forming a neat and regular plant, as a little attention, during the growing season, to stopping and judicious staking.

In the stove, heat and moisture should still be kept up, in order to allow as much air as will keep the house sweet, and prevent the plants being too much drawn by the shading required in bright weather. As the plants advance, keep them thin by removing the hardier species to the intermediate or greenhouse; also remove those orchidaceous that have made their growth and need it, to a drier atmosphere, to dry them off a little, and they may be made to make a second growth before the season is too far advanced, if such a course be deemed desirable.

D. M.





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THE GENUS BARKERIA.

WITH AN ILLUSTRATION.

THE genus Barkeria, one of the most elegant of the whole order, was so named by Messrs. Knowles and Wescott in the "Floral Cabinet," in compliment to G. Barker, Esq., of Birmingham, a zealous cultivator of orchidaceous plants; it is comprised of but three species, all of them, however, remarkable for their neat compact manner of growing, and very specious inflorescence. The first introduction took place in 1836, when *B. elegans* was received from Mexico. This is a beautiful plant, though perhaps the least interesting of the three; its flowers are rather less than those of the species now pourtrayed and of inferior brilliancy, yet possessing colours of nearly the same shades. *B. Lindleyana*, a smaller and more delicate species, bearing lovely dark purple flowers, was the succeeding importation, followed, in 1841, by the present, *B. spectabilis*, from Guatemala. This species, distinguished as it is by its more robust habit and manageable character, together with its comparatively large and lovely flowers, must be regarded as decidedly the finest of the genus, and quite indispensable to all collections.

The entire genus approaches more nearly to Cattleya than to any other vegetable form, both in its botanical character and in cultivation, though there are peculiarities in both which readily distinguish it. It is known from Cattleya by its small,

round, tapering, fleshy stems, covered for nearly two thirds of their length by a thin membranous coat, and the narrow, lanceolate, acuminate leaves, though more particularly by its flat, undivided lip, that of the *Cattleya* being more or less rolled up and three-lobed; and in culture, though it agrees with respect to temperature, the supply of moisture, and general management, yet it almost refuses to vegetate if attempted to be grown in a pot, in the manner usual with the former genus. This, perhaps, may be accounted for by the fact that it is at all times extremely impatient of stagnant moisture, and as the old roots are not so persistent as with most other *Orchideæ*, it becomes doubly important that no accident or injury be sustained by the young ones, or, as a matter of consequence, a severe check will be given to the entire plant.

The manner in which we have seen it grown to the greatest advantage, is upon billets of wood, with little or no covering, and suspended from the roof of a house, having a comparatively low temperature. It must be understood we do not mean solid blocks of wood, which would have an ugly, heavy appearance, if cut large enough to hold only a moderate number of stems, but a peculiar kind of small platform, made by cutting a number of stout oak stakes into lengths proportionate to the size of the plant, and fastening three or four, or more, longitudinally together, in the manner of a raft, and on these another layer crosswise, securing the whole tightly one to another. This kind of basket, if we may so term it, offers a broad surface for the roots to extend over, and the interstices retain some moisture without its being present in any quantity, and afford the plant a ready means of becoming firmly established, beside facilitating the management by the ease and certainty with which the supply of water can then be regulated. These billets should be of sufficient size to carry the plants several years, as they do not succeed if frequently removed. In order to properly secure new plants to the wood, it is sometimes necessary to use moss about the lower part of the stems, but as little as possible should be employed, for it offers a refuge for snails, woodlice, and other insects, that they will not fail to make use of, and then but small chance is left to the new roots, which are invariably bitten off as fast as they are protruded.

The general management of *Barkeria* may, as we have before remarked, be referred, in almost every particular, to that proper

for Cattleyas, a rather low temperature at all times, say 65° for the mean in summer, and a reduction of about 10° through the dull weather of winter and while the parts are dormant, maintaining throughout a corresponding difference in the supply of moisture. During the growing season it may be applied by immersing the blocks in water twice a day, and at the same time a tolerably free supply of fresh air should be admitted to the house whenever a favourable opportunity occurs, observing to keep the young foliage out of the way of strong draughts or powerful sun-light. Nothing more than this is necessary to insure on established plants a rich display of beautiful blossoms, for to its other attractions this species joins that of being a most abundant and free bloomer.

ED.

## ON THE CULTIVATION OF THE AURICULA.

By Mr. J. ATKINS.

THE Auricula, one of the earliest and favourite flowers of spring, still continues to be very generally cultivated, and many new varieties are still produced.

The compost which I generally use is one part rich loam, one of leaf mould, one of decomposed horse or frame dung, and one ditto of cow dung and river sand. For strong plants, intended for exhibition, I would add to the same compost, as a stimulus, a portion of well-decayed night soil, with the application of liquid manure once or twice before top dressing in February, and again in March ; this, if made with one peck of sheep dung and the same of horse droppings, put into a large tub of water, and left to ferment about a week before it is used, may be applied with good effect and perfect safety.

In WINTER, Auriculas do not require much of our attention beyond watering them occasionally, plucking off the dead leaves, and covering them with mats or litter during severe frost. I prefer keeping them rather dry than otherwise during winter, by placing them on boards in frames. I generally top dress my plants about the middle of February, and give them a little manure water about twice in the course of the month.

SPRING.—To insure a good bloom, much depends upon the care taken of the plants in March, when their trusses are form-

ing; let them receive no check whatever, either from want of covering or of water, as they show the effects when they come in bloom. Give plenty of air at all opportunities, to prevent their drawing and becoming weak, so that they are not able to support their trusses of flower. By the end of the second week in April, the flowers will begin to expand and show their colours, and the lights must be kept on by day and night, to prevent the heavy rains from washing them or their being tarnished by the sun, either of which would spoil their beauty. I generally give air by lifting the lights at back of their frames, shading them during the heat of the day and shutting them up in the evening. When the flowers begin to expand, I thin out the crowded pips, so as to give room to the others. When my plants are fully blown I generally place them under a fence or hedge, elevated on boards, or coal ashes, with hand glasses placed over them, as in this position they last so much longer in bloom. As soon as the flowers begin to fade, if seed is required, care must be taken to pick the dead flowers off as soon as they have become dry; then take the plants and place them where they will be sheltered from the hot sun and heavy rains till November, when they should be placed on a raised platform, and sheltered from the heavy rains by boards or shutters, hanging on hinges, to let up or down as occasion requires. I generally begin to pot my plants about June, or sometimes later; I generally remove the offsets about March, because they grow quickest in spring. In doing this, care ought to be taken not to rend the main root of the old plants, which would often produce canker and rottenness: less injury will arise from a clean cut with a sharp knife than from a forcible separation by the fingers. The seed of the Auricula should be sown in January, in very light compost, and covered very thinly over. The pots should then be placed on a little heat, as it will vegetate sooner; as soon as they are up remove them to the greenhouse, and cover with a hand-glass till they are hardened off, and when the plants are sufficiently large, transplant them into small pots, placing four or five together in a compost of one half leaf mould, one quarter cow dung, one quarter sandy loam, which I find most suitable for them.

The principal points to be attended to are, to put plenty of broken tiles at the bottom of the pots to secure a good drainage; to shorten the tap roots of old or strong plants; to place them

in a shady spot in summer; and to guard them from too much wet in autumn.

There are five distinct classes of varieties; viz., the green-edged, grey-edged, white-edged, plain or self-coloured, and the shaded alpines.

## CULTURE OF THE PELARGONIUM.

By Mr. W. SMYTH.

THE seeds of the Pelargonium should be sown as soon as they can be had ripe, or early in the spring, and then they will make strong plants for the following spring. Sow it in 48-size pots, well drained with broken pots covered with moss, in a soil composed of equal portions of loam, leaf mould, and sand, which should be well pressed down; cover the seed with a quarter of an inch of the mixture, slightly press it smooth, and then sprinkle the whole with a fine rose watering-pot, and place them in a frame or pit where there is a little bottom heat; as soon as the plants make their appearance, air must be admitted to prevent them from drawing or damping off, and when they have four or five leaves they may be potted into small 60-size pots, placing them back in the frame, where they should be kept close for a few days, after which air may be again freely admitted. By the latter end of September they may be taken to the greenhouse, or pelargonium house, where they will remain all the winter, keeping them as near to the glass as possible; air must be admitted on fine days. In March they may be shifted into 48-size pots, where they will remain till they flower.

PROPAGATION BY CUTTINGS.—By the latter end of June the plants will be going out of bloom, and it will be best to cut them down, and prepare the cuttings as follows:—Cut just below the joint, and then take the two lower leaves off. I prefer the points of the shoots, for they make the best plants, and do not stop the cutting till they have taken root. The compost that I use is loam, sand, leaf mould, and peat, in equal quantities, well mixed. Take 32-size pots, well drained, and fill them with the above compost, well pressed, and sprinkled with a fine rose water-

pot; put the cuttings in with a small pointed dibble, closing the soil to the cutting, and place them in a cold frame on ashes, shading them during the day with a mat. As soon as they have struck root they may be potted off into 60-size pots in the above compost, and placed in the cold frame for two or three weeks; admit plenty of air, and as soon as they fill the pots with roots they may be shifted into 48-size pots, and exposed to the open air in a full east aspect, where they can remain until they are taken to their winter quarters; let them then be placed as near the glass as possible to prevent them from drawing. Water ought to be used very sparingly until March.

CULTURE FOR LARGE SPECIMEN PLANTS.—In April select some of the best young plants just mentioned, and shift them into 24-size pots, stopping them all the summer at every third joint; by the beginning of June they may be exposed to an east aspect, and care must be taken not to let them get pot bound, or neglected for the want of water; and if they are infested with insects they must be fumigated with tobacco, and kept well syringed; by September they will be good bushy plants, and they may then be taken to the house where they are intended to flower; place them near the glass without its touching the foliage, give them all the air possible in fine weather, and let them be frequently well fumigated; water must be sparingly used until March, when they may be shifted into the flowering pots, No. 6, or 8, or 12, well draining them as directed before, according to the size of the plants. The plants must be regularly trained round the pots. The manure water that I shall recommend there will be no danger in using, and it will be found very beneficial to the plants:—Take one bushel of sheep's dung to 20 gallons of water; or, if sheep's dung cannot be got, two bushels of rotten horse-dung; let it stand three or four days, and then water them three times a week, until they show their colours. As soon as the plants have done flowering they should be cut down to the last two eyes of each leader; place them in a cold frame until they have broken, when they may be shaken out of their pots, and repotted into as small a size as they can conveniently be got into; place them again in the frame until they are rooted to the side of the pot, when they may be shifted into a size larger, sprinkling them over the head every evening. I do not recommend old plants to be grown, as neither their trusses nor flowers are so large, nor the colours so good, as those

of young plants, but the flowers are more numerous. The compost that I recommend for growing specimen plants is two parts rich turfey loam, one part two-year old rotten dung, and one half part sand and turfey peat, well mixed together, chopped fine, but not sifted.

### HORTICULTURAL ESSAYS,

*By the Members of the Regent's Park Gardeners' Society.*

## VENTILATION OF EARLY FORCING-HOUSES.

By Mr. T. MOORE.

IN considering the question how far the admission of air to forcing-houses is practicable and proper, it is natural to ask, in the first place, for what purpose the admission of the external air is resorted to.

The lights, and the other various contrivances for the admission of air, seem to be opened for one of these reasons, — either to regulate and lower the temperature; to allow the escape of impure air, or that from which some essential constituent has been abstracted by the plants; and to allow the ingress of another portion of the atmosphere more perfectly charged with all its necessary elements: the former of these points is a distinct consideration; the two latter merge into one.

The admission of cold air as the sole or even principal agent in regulating the internal temperature of a forcing-house, at an early period of the season, seems to me to be perfectly unjustifiable. There are indeed instances in which it can hardly be avoided during the time that artificial heat is applied, but these constitute exceptions rather than the rule. There are periods of the year, too, when it is unnecessary to apply artificial heat at all, and when it is utterly impossible to avoid having recourse to the practice; but it is not to this part of the season that the present remarks are intended to refer. As an illustration of the exceptions just referred to, we may suppose a case in which the external cold, and the degree of heat internally applied,

were so exactly balanced as to render the temperature precisely what was desired: in such cases, and under such circumstances, a sudden sun-burst, by at once changing and overturning the pre-existing conditions, would also destroy the balance between them and the internal heating power; and then the admission of external air, so far as it were desirable to prevent an increase of internal temperature, would obviously be the proper course to pursue. In other, and more ordinary cases, I cannot think that the same rule applies. It is by no means an unusual thing to hear recommendations to apply a higher degree of artificial heat than would otherwise be requisite, in order *to be able to give air*; this appears to mean, to be labouring under a disadvantage. Heat, as applied in early forcing, is altogether artificial, and therefore so far unnatural; and it appears to me still more unnatural to apply more than is requisite for the purpose of having to cool the internal by admitting the cold external air, without, as I conceive, securing any equivalent advantage. It would appear to be more reasonable, as well as economical, to apply as *much heat* as was desirable, and no more; or, at least, as near to this point as could be gained. But then it may be said, that it would be unsafe to work so close to the desired point, as a sudden change out of doors might be felt unfavourably within. To some extent, under present circumstances, this might be true; but then the object to be kept in view would be, so to improve upon present circumstances as to obviate the risk and inconvenience which might otherwise thus ensue. It is not when the mild and genial weather of spring is experienced that these remarks have any forcible application, but previously to this, when the outward elements are unfavourable to the developement of vegetable life.

The reduction of the price of glass will admit the use of a better article than hitherto, and also of more exact workmanship, and this alone would prevent a good deal of the influence of external changes being felt within at an early part of the season. At present forcing-houses generally, instead of having the very best of material and workmanship, are constructed with the very worst, the best being applied to greenhouses and conservatories, where, beyond the appearance of them, they are less required. Then again, in boilers and heating apparatuses, there is much to be yet accomplished; and even though an

apparatus of greater power than has hitherto been attained should not some day be contrived, yet in adapting those at present in use, and in erecting them so as to have a perfect control over them there is much to be accomplished. One half of the heating apparatuses at present erected perform their work without such a thing as control over them being known between the two extremes; and the greater part of the other half are very far from being perfect in this respect. Here, then, is the point to which improvement should be directed: provide an apparatus which in a few minutes will produce a greater or less amount of heat, as it may be required, almost with mathematical exactitude, and then there can be no serious risk in not maintaining an uniformly unnecessary degree of heat.

The other consideration which refers to the escape of the deteriorated or confined air, and the consequent necessity of admitting a fresh volume in its place, does not appear to offer insurmountable difficulties in the way of a belief that the admission of air is very frequently carried to an injurious excess. Admitting that plants in the process of growth, and in the discharge of their vital functions, do abstract certain matters from the atmosphere about them, there is nothing, even in this, to render the admission of fresh air, in volumes of any considerable extent, at all necessary. The elastic and all-pervading properties of the atmosphere must not be lost sight of. Under any circumstances, and with the mode of construction at present adopted in hothouse architecture, a considerable interchange will be found to take place between the internal and external volume; and, with evidence of the successful growth of plants, in situations so far closed up as the Wardian cases, we cannot do otherwise than believe that this interchange, which takes place as it were of necessity, is sufficient to secure the health and vigour of the plants, so far as the admission of air alone is concerned. If it is argued that deterioration will take place by reason of evaporation from flues or pipes or any substances confined within the structure, or from the decomposition of any organic matter, the same fact of an interchange continually going on is sufficient to meet the case, so far as to show that on this ground at least the admission of a large bulk of external air is not at all essential. Besides, with a proper routine of management, the gases which arise by means of evaporation from ordinary surfaces, or the decomposition of ordinary sub-

stances, should be beneficial to vegetation rather than detrimental; and it can only be in cases where gross mismanagement of some kind or other exists, that they can be productive of any injury or inconvenience.

While such considerations as these seem to point out that the admission of air to any great extent to forcing-houses, at a very early part of the season, is not on good grounds a matter of urgency, and that at any rate the influx of large volumes of cold air is decidedly hurtful at that time of the year, yet the other extreme must not be fallen into, for the process may not altogether be dispensed with. It does appear, nevertheless, that the regulation of the temperature, — the prevention of too powerful a degree of heat, when the source of that heat is the sun, — is the great end to be effected by the practice. If there are any other real advantages, they are certain to follow, if air is admitted for this purpose alone; and these advantages, if any there are, are not likely to be lost, if air is not admitted, when it is not necessary to do so with this primary purpose in view. Periods of bright sunshine, then, may be regarded as the only instances in which a recourse to the practice is absolutely necessary.

From all this the conclusion at which I have arrived is, that with a proper system and routine of management, as regards atmospheric humidity and temperature, the admission of large volumes of the external air to the interior of forcing-houses is not politic, nor by any means so essential as it is generally represented to be. Whatever other difference of opinion may exist with respect to this point of practice, it cannot be denied that a risk is incurred, and frequently an injury sustained, when cold air comes in contact with the tender organs of forced plants, at an early part of the season; and therefore, if no other advantage than the regulation of the temperature is derived from the practice, then, except in cases when the internal heat is increased by the influence of the sun, and therefore uncontrollable, it would be a wiser course to apply a less amount by artificial means, thus rendering it less necessary to allow the superabundant portion to escape, and exposing the plants in a less degree to the risk already alluded to.

Even in those cases in which it is really necessary to have recourse to the practice, much injury may be sustained by admitting it in a rash and improper manner. It should be so

contrived that the change to be effected may be brought about gradually, and the cold and heated volumes should be made to intermingle regularly, and as far as possible in every part of the house ; thus if it were desirable to admit a foot or yard of cold air, this foot or yard could not be allowed too many points of ingress.

The subject might be considerably extended, were not the present paper already sufficiently long.

*May 1st, 1845.*

### GLOSSARY OF TERMS USED IN BOTANICAL DESCRIPTIONS.

( *Continued from p. 155.* )

**BACCA.** A berry, distinguished chiefly by their vinous properties.

**BACCATE.** Bearing berries, having a fleshy covering.

**BAGGED.** Resembling a pouch or bag.

**BANDS, OR VITTE.** The flattened or hollow spaces between the elevated ribs of the fruit of umbelliferous plants.

**BAND-SHAPED.** Descriptive of the form of an organ whose length is much greater than its width.

**BARBATUS.** Bearded.

**BARK.** The external covering of the stems and roots of all cotyledonous plants, increasing annually on dicotyledones by an additional deposit.

**BARS.** Distinct lines of colour upon the floral portion of a plant.

**BASAL.** Proceeding from the base.

**BASE.** The point of union between an organ and its support.

**BASINERVIS.** When the veins of a leaf extend from one extremity to the other without subdividing.

**BEAK.** A pointed projection, resembling the beak of a bird.

**BEARD.** An hairy pubescence usually attached in tufts, used improperly as a synonym for awn.

**BEARDLETTED.** Having small awn-like processes.

**BEDEGUAR.** A fibrous excrescence, frequently seen on the rose, occasioned by the puncture of a cynips.

**BI-ACUMINATE.** Applied to an organ when divided so as to present two points.

**BI-CONJUGATE.** When a general petiole or leaf-stalk is extended at its apex into two secondary or smaller petioles.

**BICORMIS.** Having two horns.

**BI-CUSPIDATE.** Having two points.

**BIDENTATE.** Double-toothed, when the angular points of a dentate leaf are themselves toothed.

**BIDUUS.** Continuing for two days.

**BIENNIAL.** A plant which requires two years to produce its seed, and then dies.

**BIFARIOUS.** Arranged in two rows.

**BIFID.** Two-cleft, divided nearly half the length.

**BIGEMINATE.** Synonym for biconjugate.

**BIGUGATE.** When a pinnate leaf possesses but two pairs of leaflets, with or without the terminal one.

**BILABIATE.** Having two lips, when the mouth of a single-petaled flower is divided into two parts.

**BILATERAL.** Arranged on two opposite sides.

**BILOBED.** Double lobed.

**BILOCULAR.** Applied to seed-vessels containing two cells or cavities.

**BINATE.** When two leaflets proceed from a common petiole.

**BIPARTIBLE.** Applied to fruit which is readily divided into two similar parts.

**BIPINNATE.** When the secondary petioles of a compound leaf are arranged pinnately or opposite to each other, and the leaflets in a like manner on them.

**BISERRATE.** Double serrated, the serratures of a leaf being themselves knotched.

**BITERNATE.** When both the leaflets and secondary petioles of a doubly-compound leaf are ternate.

**BLADDERS.** Cellular expansions common to many aquatic plants, by means of which they are enabled to float.

**BLADE.** The limb or expanded part of a gramineous leaf.

**BLANCHED.** The whitened appearance which vegetation assumes in the prolonged absence of light.

**BLAND.** Lovely, fair:

**BLIGHT.** A vague term applied to all diseases of plants.

**BOLE.** The trunk of a tree.

**BONY.** Formed of a hard brittle substance, as the stones of many fruits.

**BOLULIFORMIS.** Sausage-shaped.

**BRACHIATE.** When opposite pairs of branches cross each other alternately.

**BRACTS.** Leaves seated on the peduncles and pedicels, varying both in form and colour.

**BRACTEOLA.** Small bracts, placed near to the calyx.

**BRISTLES.** Short rigid hairs.

**BRUNNEUS.** Deep brown.

**BULB.** An underground bud, seated immediately over the root; the two principal forms are the scaly bulb as in the lily, and the laminated bulb of the tulip.

**BULBIFEROUS.** Disposed to produce bulbs, or the parts of a plant which do produce them.

**BULBILLUS.** Bulbiferous buds produced above ground on the stems of lilies, &c.

**BULBO-TUBER.** Synonym for cormus.

**BULBUS.** A bulb.

**BULBULUS.** A young bulb.

**BULLATUS.** Having a bubbled or blistered appearance.

**BYSSACEOUS.** Composed of delicate cotton-like filaments, as the roots of some mushrooms.

## LIST OF NEW PLANTS.

IRIDACEÆ. — *Triandria Monogynia*.

*Iris imbricata*. This is a very showy perennial, which most probably will prove quite hardy in the open border; it appears to be a mere variety of *T. squaleus*, from which it differs in its pure lemon-coloured flowers, and in the short blunt convex bracts which invest their base. It has flowered with the Hon. and Very Rev. the Dean of Manchester. — *Bot. Reg.* 35-45.

ANACARDIACEÆ. — *Polygamia Monacia*.

*Rhus diversiloba*. This shrub was brought from California by R. B. Hinds, Esq., who found it in that country. The country people call it Yeara, and say it poisons on contact, or even through the air, in which respect it resembles the common poison oak, *R. Toxicodendron*, to which it is nearly allied. Indeed it is so like that species, that if it were not for an upright unscrambling habit, and very blunt leaflets, it might be looked upon as a mere variety. Mr. Hinds says that the bush was common everywhere in California, but that he never witnessed any bad effects from it. It will probably prove hardy. — *Bot. Reg.* 38-45.

LILIACEÆ. — *Asphodelus*. — *Hexandria Monogynia*.

*Ornithogalum nanum*. A pretty little hardy bulb which grows freely in very rich sandy loam, and flowers in March. It is certainly very distinct from any of the genus otherwise in cultivation; its stiff narrow leaves and short-stalked dwarf corymbs offering characters not to be mistaken. It is said to grow in marshy meadows at Berbeck, near Constantinople. According to Sibthorp it occurs in dry hills in Arcadia and about Abydos. — *Bot. Reg.* 39-45.

GROSSULACEÆ. — *Pentandria Monogynia*.

*Ribes sanguineum flore pleno*. This is a seedling variety possessing double flowers, of the well-known scarlet-blossomed currant, and must prove a most acceptable addition to our early spring flowering shrubs. The racemes are rather larger than those of the parent species; the flowers full and double as a rose, and the colour a rich vivid crimson. It is described as being about three weeks later in flowering than the original species. The merit of originating this valuable hardy shrub is due to Mr David Dick, gardener to the Right Hon. the Earl of Selkirk, at St. Mary's Isle, Kirkcudbright. — *Pax. Mag. Bot.*

GENTIANACEÆ. — *Pentandria Monogynia*.

*Chironia floribunda*. Respecting the native country of this pretty bright-red flowering little plant we have no direct evidence; but, like the rest of the family, it has doubtless been obtained from the Cape of Good Hope. It was introduced to this country from the continent last year by Messrs. Jackson, of the Kingston nursery, and is identical with the *C. Fisheri* of Messrs. Rollison's establishment, obtained about the same time from a similar source. In character it is a low-growing plant, divided into numerous branches, which spread out in a lateral direction and speedily form a neat compact bush, flowering near the extremity of each shoot. — *Pax. Mag. Bot.*

*Leianthus longifolius*. A rare plant in our gardens. It was introduced, however, to Kew as early as 1793, by Capt. Bligh, of H. M. S. Providence, and then lost to our collections till 1825, when it was published in the Botanical Register from plants in the nursery of Messrs. Lee and Kennedy, at Hammersmith. Again it seems to have been wanting to our stoves till the summer of 1844, when it flowered in that of His Grace the Duke of Northumberland at Syon, and that of Kew, to both which places the seeds were sent by their collector, Mr. Purdie. The habit of this plant very nearly resembles that of *L. nigrescens*; the flowers, however, are bright yellow. — *Bot. Mag.* 4169.

MUSACEÆ. — *Pentandria Monogynia*.

*Strelitzia Augusta*. Anteniqua Land in Southern Africa is the station assigned for this plant by Thunberg, who describes the native caudex or trunk as eighteen feet long, and the leaves and petioles from the summit of that nearly as much more. It was introduced to Europe in 1791, by Mr. F. Masson, then Botanical Collector for the Kew Gardens, where it has lately flowered; the flowers are like those of *S. Reginae*, except that they are pure white: the spathe, however, affords a fine contrast in its exceedingly rich deep purple tint. The Kew plant has, including its leaves, attained a height of twenty-three feet. — *Bot. Mag.* 4168.

MALVACEÆ. — *Monadelphia Polyandria*.

*Sida (Abutilon) peoniæflora*. Another of the interesting discoveries of Mr. Wm. Lobb in the Organ Mountains of Brazil. It is a strong-growing

plant, forming a tall shrub or small tree, with large handsome foliage and corresponding flowers of a pleasing rosy-crimson colour, produced from the axils of the leaves near the extremity of the shoots. It will rank in the section *Abutilon*, and along with *Sida picta* and *S. Bedfordianum*. It flowered in the stove of Mr. Veitch's Nursery, in January, 1845. — *Bot. Mag.* 4170.

LEGUMINOSÆ. — *Decandria Monogynia*.

*Gompholobium barbigerum*. One of the most beautiful of the many New Holland *Leguminosæ*, confounded by Sieber with the *G. fimbriatum*, but correctly determined by De Candolle, and named by him *barbigerum*, in allusion to the curious, deep, beard-like fringe on the margins of the keel of the corolla, by which character it is readily distinguished from *G. grandiflorum*, and no less easily by its broader leaves and larger (and brighter yellow) flowers. It flowered in the greenhouse of the nursery of Messrs. Lucombe and Pince, who appear to have been the first to introduce it alive to this country in April, 1845. — *Bot. Mag.* 4171.

BEGONIACEÆ — *Monacia Polyandria*.

*Begonia albo-coccinea*. One of the most lovely of this beautiful genus, which we cannot too much recommend for cultivation to all admirers of hot-house plants, blooming throughout the spring and summer months; the flowers are numerous, white and coral-red. Our plants were raised in the Royal Gardens of Kew, from seeds sent from India by — Strachan, Esq. of Twickenham, Surrey. — *Bot. Mag.* 4172.

ORCHIDACEÆ § VANDÆ. — *Gynandria Monandria*.

*Odontoglossum Cervantesii*. Of the beautiful things belonging to the white-lipped section of this genus not one is more perfectly lovely than the present. It is in the way of the well-known *O. Rossiæ*, but its large, thin, delicately pink flowers, banded with crimson near the centre, are in all respects much handsomer. It was imported by Messrs. Loddiges from Oaxaca. Among other valuable attributes the plant has that of being very sweetly-scented, emitting a delicious odour, something like bitter almonds. — *Bot. Reg.* 36-45.

*Oncidium spilopterum*. A beautiful species, seeming to be intermediate between *O. Lanceanum* and *Carthaginense*. Its flowers are large and yellow, with small brownish-purple sepals and petals; the base of the labellum is the same colour, while the wings of the column are clear yellow, spotted with crimson. The flowers grow in an erect raceme, longer than the leaves. — *Bot. Reg.* 40-45.

LITERARY NOTICE.

HORTUS CANTABRIGIENSIS, (13th ed. enlarged and brought down to the present time,) by P. N. DON. *Longman & Co.* The want of a complete catalogue of all the plants known to our gardens has been severely felt for several years, the vast number of accessions constantly pouring in having annually

increased the difficulty, until the whole of the published works of this nature were becoming nearly useless. The appearance of the present work is, therefore, most opportune ; and what is more, it is as correct as a book of the kind can be expected. Arranged on the Linnæan system, with separate indexes of the popular and scientific names, and the recent alterations and divisions of genera particularly marked, reference of any kind is rendered easy, and the information conveyed is both concise and satisfactory. It is just the book a gardener requires, and we receive it with a hearty welcome.

## FLORAL INTELLIGENCE.

### ROYAL BOTANIC SOCIETY.

THE second exhibition for the season took place in the Society's Gardens, Regent's Park, on Wednesday, June 4th. Her Majesty, Prince Albert, and suite honoured the meeting with their presence. The plants were magnificent. Mr. Barnes, gardener to G.W. Norman, Esq., Bromley, received the first prize for a collection of thirty miscellaneous plants, comprising among others, unequalled specimens of *Aphelexis humile* and *A. purpurea*, *Gompholobium tenellum*, *Clerodendron squamatum*, *Pinnelia Hendersonii*, *Ixora grandiflora*, *Erica odora rosea*, *Polygala cordifolia*, &c.

Mr. Hunt, gardener to Miss Trail, Bromley, was awarded the second prize for a similar collection : collections of fifteen stove and greenhouse plants were shown by Mr. Frazer, nurseryman, of Lea Bridge Road, and Mr. Pawley, Bromley. The first, Mr. Frazer's, contained fine plants of *Boronia pinnata*, *B. serrulata*, *Chorozema varium*, *Aphelexis sesamoides*, *Azalea sinensis*, &c. In the collections of ten plants the prizes were awarded, first, to Mr. Green; second, to Mr. May; third, to Mr. Kyle; and fourth, to Mr. Bruce. We particularly noticed in Mr. Green's group a splendid plant of *Coleonema pulchrum*, a good *Calanthe veratrisfolia*, and a well grown *Azalea Gladstonesii*.

The Roses in Pots formed quite a feature in the exhibition ; the prizes were awarded among nurserymen, first, to Messrs. Paul; second, to Mr. Lane; third, to Mr. Laing, and an extra to Mrs. Stedman. The most remarkable flowers among them all were *La Reine*, Hybrid Perpetual, rich rose-colour; fine formed, and perhaps the largest flower in cultivation ; *Comte de Paris*, lilac; *William Jesse*, large crimson; *Armosa*, rosy blush; *Theresita*, carmine, *Emilie Courtier*, crimson; *Eliza Sauvage*, pale yellow; and *Theresa Isabella*, white. Among amateurs, Mr. Dobson, gardener to E. Beck, Esq. received the first prize for a collection of ten, and A. Rowland, Esq. a certificate for a similar collection.

The Heaths were numerous and beautiful. Messrs. May, Barnes, and Taylor contributed fifteen each, and were placed as their names occur : groups of twelve were shown by Mr. Frazer, and Messrs. Fairbairn, of

Clapham ; the latter collection was truly splendid, and received the principal prize ; the specimen of *Cavendishii* contained in it is, we think, without a compeer. Collections of eight were sent by Mr. Hunt and Mr. Green, and others, of six each, by Mr. Bruce, Mr. Roser, and Mr. Reid.

Two large collections of *Orchideæ* were shown, the first, by Mr. Mylam, containing the magnificent and rare *Sobralia macrantha*, *Stanhopea tigrina*, *Cattleya labiata*, several *Oncidioms*, *Cirrhea*, *Brassias*, &c.; the second by Mr. Robertson. Collections of ten were sent by Messrs. Veitch, Mr. Don, and Messrs. Henderson ; and a group of six from Mr. Plant.

The *Pelargoniums* were decidedly the best we have seen during the present season. The first prize for twelve new and superior varieties was awarded to Mr. Dobson for the following :—Sir R. Peel, Matilda, Favorite, Susanna, Sultana, Pulchellum, Leonora, Lord Chancellor, Lurida, Zanzumimim, Conflagration, and Marc Antony : Mr. Staines received the second prize for Superbe, Sunrise, Enchantress, Erectum, Madeleine, Alice Gray, Duke of Cornwall, Roulette, Hebe, Lady Sale, Adonis and Sunbeam, the two latter being seedlings of 1844, and very promising flowers : the third prize was awarded to Mr. Cook. Collections of eight were shown by Mr. Coys and Mr. Bell, and one of twelve by Mr. Parker. In the nurserymen's class, Mr. Gaines obtained the first prize of twelve new kinds, as also the same for the best grown twelve, and Mr. Pamplin the second. Several seedlings were present, and some excellent flowers were among them ; those selected from the seedlings of 1844 were, first, Aurora, second, Arabella, and extras for Rosy Circle, and Bellona ; all these were from Mr. Beck. A certificate was also awarded to the same for Caliph, a seedling of the present season.

The first prize for twelve *Fuchsias* was obtained by Messrs. Lane, and the second by Mr. Gaines ; extras were awarded to Mr. Kendall and Mr. Robinson.

*Cinerarias*, in fours, were shown by Mr. Kay, and among nurserymen, by Messrs. Lane and Mr. Gaines. The first prize for six *Calceolarias* was given to Mr. Garrod, the second to Mr. Wren, and in the nurserymen's class, first, to Messrs. Henderson, and second, to Mr. Gaines. A first prize for thirty-six *Pansies* was awarded to Mr. Brown, and an extra to Mr. Bragg for a similar lot. Among seedling *Calceolarias*, which were very numerous, the best was from Mr. Kinghorn, called Exemplar ; the second, Climax, from Mr. Gaines ; and the third, Lacerta, from Mr. Garrod, received certificates. Two collections of ferns, several of British plants, and some native *Orchideæ*, were also present. Single specimens of superior cultivation were very numerous : the awards were, first, to Mr. Roe, for *Aerides odoratum* ; second Messrs. Lucombe & Co. for *Certoceras reflexa* ; third, Mr. Pawley, for *Stephanotus floribundus* ; fourth, Messrs. Veitch for *Erica Cavendishii*, extra to the same for *Xanthosia rotundifolia* ; two extras to Mr. Bruce, for *Pimelea spectabilis* and *Aphelexis humilis* ; extra to Mr. Franklin, for *Pelargonium Frankliniana* ; two extras to Mr. Barnes, for *Aphelexis humilis*, and *Leschenaultia formosa* ; extra to J. B. Craswell, Esq. for *Pavetta Caffra*, extra to Messrs. Lucombe & Co., for *Erica intermedia*.

For new or rare plants in bloom, first, to Messrs. Lucombe & Co., for *Dipladenia crassinoda* ; second, to the same, for *Vesalia floribunda* ; also a second to Messrs. Veitch, for *Fuchsia serratifolia*, and two third prizes to the same for *Vesalia floribunda* and *Siphocampylus* sp. ; also a third to Mr. Jack, for *Dipladenia crassinoda* ; extras to Mr. Barnes, for *Luxemburgia ciliosa* ; and to Mr. Plant, for *Leianthus nigrescens*.

For new or rare plants not in bloom, first, to Messrs. Lucombe & Co., for *Drimys Winterii* ; second, to Mr. Slove, for *Veronica speciosa*.

Two collections of tall *Cacti*, the first from Mr. Green, the second from Mr. Bruce ; one of *Alpines*, from Mr. Wood ; a collection of *Verbenas*, from Mr. Turner, and a floral device from Mr. W. Burton, completed the exhibition.

### NOTTINGHAM FLORAL AND HORTICULTURAL SOCIETY.

On Wednesday the 25th June, the second show of the above Society for the present season was held at the Exchange Rooms. The exhibition was opened to the public at two o'clock, and a numerous and highly-fashionable company soon after assembled.

The three large rooms were, on the present occasion, thrown into one, and could scarcely then contain the numerous specimens exhibited.

The Roses were splendid. This department was greatly enriched by the splendid collections from the gardens of Mr. Pearson, of Chilwell, and Mr. Frettingham, of Beeston, and more especially by a beautiful box of wall-roses, from the first-named gentleman.

The Pinks were very good; and the miscellaneous collections of cut flowers were gorgeous in the extreme, and greatly admired.

The large room was filled with plants, of which the Pelargoniums occupied a considerable space, and were remarkably fine.

The Fuchsias were numerous, and attracted much attention.

There were six splendidly-grown greenhouse plants from A. Lowe, Esq., for which the first prize was awarded.

The Ericas were remarkably fine, especially the best single specimen (*Jasminiflora*), forwarded by A. Lowe, Esq.

The following were the awards:—

#### RANUNCULUSES.

Best eight blooms—*Bienfait*, *Triumphant*, *Naxara*, *Melange des Beautés*, Mr. Welsh, *Tysoe's Cathcart*, *Bishop Von Lima*, and *Socrates*—Mr. S. Moore.

Second ditto—*Seedling*, *Sulphurea*, *Atlas*, *Melange*, *Fingal*, *Arbrisscan*, *Bishop*, and *Socrates*—Mr. Taylor.

Best collection—*La Temeraire*, *Socrates*, *La Dame*, *Cathcart*, *Triumphant*, *Fingal*, *Goliah*, *Apollo*, *Attraction*, *Amiens*, *Alice Gray*, *Hedley's Seedling*, *Grand Romano*, *Orissus*, *Carmus*, *No Proxy*, *Queen Victoria*, *Megellan*, *Pirate*, *Naxara*, *Mungo Park*, *Carouse*, and *Panache Superb*—Mr. S. Moore.

#### ROSES.

Best amateur's pan of twenty-four blooms—*Reine de Provence*, *De Metze* (Moss), *Aspasie*, *Madame Dubarry*, *Boule de Nanteuil*, *Œillet Parfait*, (French), *La Volupte*, *Enchanteresse* (Hybrid Provence), *Belle Marie*, *Fulgens*, *Reine de Belgique*, *Fimbriata*, *Daphne* (Hybrid China), *Felicite*, *Princess de Lamballe* (*Rosa Alba*), *Chateaubriand* (Damask), *Bernard*, *Crimson Perpetual* (Damask Perpetual), *Coquette de Montmorency* (Hybrid Perpetual), *Comice de Seine et Marne*, *Desgaches* (Bourbon), *Reine de Bassora*, *Devoniensis*, and *Josephine Malton* (Tea-scented China)—Mr. S. R. P. Shilton.

Best nurseryman's ditto—*Archduke Charles*, *Lee's Perpetual*, *Kleber*, *Pactolus*, *La Ville de Bruxelles*, *Josephine Beauharnois*, *Triomphe du Luxembourg*, *Sylvain*, *Auberon*, *Antinous*, *Madame Hardy*, *Yolande Fontaine*, *White Bath Moss*, *Crested Moss*, *Queen of Bourbons*, *Madame Laffay*, *Eliza Sauvage*, *Cramoise Supérieure*, *Charles Louis*, *Blanche Fleure*, *Common Moss*, *Princess Augusta*, *Luxembourg Moss*, and *Persian Yellow*—Mr. Pearson.

Second ditto—*Taglioni*, *Nelly*, *Brennus*, *Duke of Devonshire*, *King of Roses*, *Daphne*, *Hybrid Laxo*, *Elizabeth Frier*, *Madame Hardy*, *Las Casas*, *Caroline*, *Charles Duval*, *New Bath Moss*, *Alba Parmenteur*, *Miss Isaac*, *Victorine*, *Camoise Carnea*, *Richelieu*, *Grande Monarque*, *Camoise Supé-*

rieure, George the Fourth, Armosa, Coupe d'Amour, and Thornless Blue—Mr. Frettingham.

Third ditto—Fulgens, King of Roses, Armosa, George the Fourth, Madame Hardy, Duke of Devonshire, New Bath Moss, Old Moss, Kleber, Reine de Provence, Aspasie, Reine de Belgique, Crimson Perpetual, Brennus, Antinous, Cramoise Supérieure, Charles Duval, Crested Moss, Luxembourg Moss, Cambronne, Hypocrate, Madame Plantier, Lady Stuart, and Julia—Mr. Spencer.

Best amateur's twelve blooms—Fulgens, Armosa, Petite Pere, Belle Ellen, Madame Plantier, Tourtonell, Bell Parabere, Duchess d'Orleans, Queen of Roses, Las Casas, Beauté Etheriel, and Tollie Fontaine—Mr. William Cooke.

Second ditto—Triomphe d'Angers, Fulgens, Ne-plus-ultra, Catel, Lilac Queen, Old Moss, Unknown, Rivers's George the Fourth, Velours Episopale, Tuscany, Juliana, and Unknown—Mr. Taylor.

Third ditto—Madame Laffay, Brennus, Armosa, Duke of Devonshire, Velours Episcopale, Provence, Belle Isidore, Fulgens, Lord John Russell, Camuset Carne, and two Unknown—Mr. S. Moore.

### CALENDAR FOR AUGUST.

By far the greater number of our wild plants have flowered ere now, but still enough are to come to repay the assiduous collector. Compositæ and Chenopodiaceæ furnish numerous examples this month; and also Junceæ and Cyperaceæ, both in flower and fruit, the examination of the latter being so necessary to determine the species in the two last-named orders. All the species and varieties of Mints are in perfection, and to those who are fond of fine-drawn distinctions in characterising plants, they will afford an ample feast; in fact, they seem to vary with almost every slight variation of locality. Of doubtful or rare plants several are marked as flowering now. *Swertia perennis* is one, said to have been found a long while ago in Wales, and still retained in our Flora, although few would be found hardy enough to insist on its right to be kept there. And there are several other plants in the same predicament, and perhaps no subject would be more interesting than the searching the given habitats for such plants, and settling their claims to be included in our native Flora. Mr. Babington, in his excellent "Manual," has distinguished such plants, so that they may be easily referred to, and thus an important step has been taken towards the clearing our lists of the names of such as have not a good right to be considered as truly native.

In the Flower-garden the chief points of attention are to

have it in high keeping, and to propagate extensively for the next season. There need scarcely be a limit to this but want of room to winter the plants; if there be space, pot the cuttings off as soon as rooted, and get them well established as soon as possible, and much delay will be prevented, and a better display ensured in the next season. No seeds should ever be saved in the flower-garden, as few plants can be kept neat or sightly when in a seed-bearing state.

Greenhouse plants, if out of doors, should be guarded from heavy rains, and great attention paid to stopping and regulating the shoots, care being taken to lessen the supply of moisture as they ripen their wood, for fear an undue supply should again start them into growth, the result of which would be an almost total want of flower in the coming season. These remarks, of course, apply equally to plants in pits or houses, in both which structures a thorough supply of light and air must be maintained to harden the young wood.

In the Stove the same rules are applicable to the hard-wooded plants, and many of them might be kept in very cool houses until they have had a lengthened rest, after which they will grow with greater vigour, and flower much more freely, than if kept in the same house with so many plants of different habits, requiring so many different modes of treatment. All bulbs, tubers, &c., as Amaryllis, Gloxinias, Cannas, and, no doubt, many Orchidaceæ, which are not so used, might be benefited by a similar treatment, in place of attempting to dry them off in a house where the atmosphere always contains more moisture than can be beneficial to plants that require a perfect rest.

D. M.

**FLORIST'S FLOWERS.** — Dahlias will now require a large share of attention: tying, thinning the buds and stems, shading the flowers, &c., must be done as soon as necessary. Continue to propagate Pansies, and pot those already struck to stand through the winter. Finish laying Picotees and Carnations. The earth for potting the layers in should be prepared; the best for the purpose is light fresh loam without admixture. Plant out Pinks. The roots of Ranunculuses and Anemonies, Tulips, &c., taken up last month, should receive a thorough drying, that they may be ready for the winter. Roses may still be budded or layered, wherever it may yet be required.





THE  
FLORIST'S JOURNAL.

SEPTEMBER, 1845.

ON THE PINK.

WITH AN ENGRAVING OF NEVILLE'S MONITOR.

THE Pink is a favourite of such long standing, and has been so universally cultivated, as to be altogether beyond the need of our praise ; in fact, to say any thing of its beauties would be as superfluous as to speak of its culture, both points having been discussed, and we dare say definitively settled, long before we were born. The fancy has, however, descended through several generations somewhat in the manner and even condition of an old heir-loom, respectably antiquated, and we fancy a little too much out of fashion to suit the present advanced taste. Unlike the position of our forefathers, we are surrounded by novelties in such pleasing and varied forms, that each one seems to demand the entire attention, and, under such circumstances, it appears hardly possible for any particular portion of the art to maintain its former standing, without embracing the general onward movement. It is not enough that the flower, be it ever so old a favourite, should be only as good now as it used to be ; it, like all other "forms of the florist," must be improved, and the Pink-fancier will do well to look about him for the most desirable changes he can hope to introduce. In a few years, rose-leaves, as they are termed, or petals with perfectly even margins, will be indispensable ; this, with more substance, and a greater variety and regularity in the disposal of the colours,

ought to engage the attention of every one who attempts to raise and perpetuate new kinds.

The reminiscences of pink-growing are always most interesting to us, associated as they are with names whose bare mention conveys an emotion to the breast of every true lover of Floriculture: nor must we forget, that with attention to this flower originated that excellent and most beneficial idea of exhibiting flowers and plants in public competition, a connection which deserves to be commemorated by all possible means; for from the adoption of the plan, Horticulture may date its entire advancement; and no better or more desirable means can be employed to continue this remembrance, than so to raise the general character of the Pink as to ensure for it the prominent position it deserves in all future exhibitions. This it is decidedly entitled to, either for its intrinsic beauty or from the regard it ought to inspire as the foundation and foster-parent of all similar institutions. More than this we cannot wish it; but with less no thorough florist ought to be satisfied.

Our illustration is a seedling of the present season, taken from the extensive and unique collection of Mr. J. T. Neville, of Peckham, a gentleman of whom we can only say, his name alone has ever been sufficient guarantee for any flower.

ED.

#### HINTS TO AMATEURS.

Now that the flowering season of most plants is leaving us, the amateur may fancy that his work is done for some five or six months; it may not therefore be amiss to remind him of some particular operations which require attention at this part of the year, and in fact cannot be done at any other time with equal advantage.

First, then, Pelargonium seed should be sown at once, or the plants will not bloom in the ensuing season, and thus the trouble of keeping them two seasons instead of one before their relative value can be ascertained is incurred by the delay of only a few weeks; there are besides several other seeds that succeed much better if sown now, than at any other period; those of all kinds

of greenhouse plants, and, I may add, hardy herbaceous plants, together with some of the stronger constituted annuals, are much safer in the ground, than in the drawers of the seed cabinet. Among annuals for ornamenting the greenhouse, either in winter or early spring, *Schizanthus*, *Portulacca*, *Primulas*, &c. may be mentioned as belonging to the latter class, and which should be sown directly, and protected through the winter in frames or the house; others that will blow all through the dull weather are such plants as *Nemophila*, *Clarkia*, *Viscaria*, *Erysimum*, *Lupinus nanus*, *Mignonette*, and a few others; these also should be sown, and potted off as soon as they can be handled, and will afford a pretty display for a long period: with respect to imported seeds, their arrival now becoming of common occurrence, it is always best to sow them as soon as they arrive, unless it be in the very dead of winter. Some growers sow their auricula and tulip seed this month: from this practice, however, I differ, because the *Auricula* will speedily come up, but will not attain sufficient size before the winter, when the frosts frequently raise them out of the soil, and thus leave them exposed to the wasting influence of the winter's wind, besides the great injury inflicted on the yet delicate roots. Tulips, on the other hand, seldom vegetate before the spring, and this gives the mice a fine chance to shell all your best seed.

Plants for forcing require some examination just now, that they may be in a proper condition to begin with, when the season arrives. Bulbous roots, such as hyacinths, tulips, &c. intended for the same purpose, and which it is desired to have in bloom at an early period, should be potted immediately, and in connection with so much potting and sowing, it is necessary above all things that the various soils required for composts be in their respective places, which should be always under cover, or they cannot be used in the manner most proper when wanted in a hurry.

If alterations of any kind are contemplated, a definite idea of their extent and nature should be come to at once, or it will become more difficult to determine every week, as I hold it to be next to impossible to form a correct estimate of effect, when the surrounding vegetation is entirely denuded of foliage: work of this kind, requiring forethought, should always be decided on in good time, and observation made of its probable appearance before it is put in hand; this often affords an opportunity of

adopting improvements which are impracticable when the work is completed.

I may possibly, Mr. Editor, be anticipating your calendar of operations, but there I know you are necessarily brief, which may perhaps afford room for and serve as an apology for my bluntness. I shall now conclude with one that you have hitherto forgotten to give us. Any one in possession of a promise from a friend of "a few cuttings" should take an early opportunity to make an accidental call, or that uncompromising no-getting-over-able bar to the wished-for accessions, "you are too late," waiting in remembrance with wicked malevolence throughout the entire season.

HORTULANUS.

#### HORTICULTURAL ESSAYS.

*By the Members of the Regent's Park Gardeners' Society.*

#### ON THE CULTURE OF AQUATIC PLANTS.

By MR. THOMAS DAVIS.

THE aquatic plants of the Eastern hemisphere from their elegance and beauty rank as objects of no mean interest in the catalogue of vegetable forms: some of them are allied by their similarity of structure to the *Algæ*, as *Zostera* and *Aponogeton* in the natural order *Fluviales*, which may be mistaken for subjects in that inferior class of vegetable organisation; while on the other hand the noble tribe of *Nymphaeæ* stands unrivalled for the beauty of the several species of which it is composed. The beautiful blue of *Byblis linifolia*—the rich tinted brown of *Vallisneria spiralis*—the delicate pink of *Nelumbium speciosum*—and the highly fragrant perfume of *Aponogeton distachyon*—have each and all a deep and peculiar interest among other objects which occupy the wide domain of nature.

The different species of aquatic plants belong to no particular order of the vegetable system, but are dispersed through the principal divisions of the natural arrangement. They are indigenous to most parts of the known world; but the British

species form very conspicuous and interesting plants to deck the hardy aquarium.

Many of the species which are most difficult of culture are natives of the tropics, and require a congenial atmosphere (varying from 55° to 70° artificial heat, and up to 90° solar heat) to disclose their flowers: as they require intense light, they should be placed near to the glass: where cisterns are used, a waste pipe is requisite to take off the water when becoming injurious to growth.

#### STOVE AND EXOTIC SPECIES.

*LIMNOCHARIS HUMBOLDTII* belongs to the natural order *Commelinaceæ*; its name is derived from *limne*, mud, *charis*, grace; it thrives in retentive loamy soil, and produces an abundance of its bright yellow three-petalled flowers, if planted in a cistern or tank where a good heat is maintained. Introduced from Buenos Ayres in 1831.

*NELUMBINUM SPECIOSUM*, from *nelumbos*, its name in Ceylon, belongs to the natural order *Nymphaeaceæ*. The delicate colour of its bright pink flowers makes it a desirable object: it requires to be kept dry after the blooming season, and again excited about the beginning of February. The fruit of *N. speciosum* is supposed to be the Egyptian bean of Pythagoras: it grows in great luxuriance in the ditches, in all the hotter countries of the East; and requires intense heat to expand its flowers.

*BYBLIS LINIFOLIA*, named from *Byblis*, daughter of Miletus, ranks in the natural order *Droseraceæ*; it is a pretty, though minute plant, with blossoms of a beautiful blue, which are produced freely when planted in a good loamy soil; but it succeeds best when placed in a shallow cistern in the stove. Native of New Holland, introduced in 1800.

*DESMANTHUS NATANS*, a native of China, is a beautiful and interesting aquatic, producing its singular white flowers in abundance if planted in a retentive soil, in a cistern where there is constant heat; while its foliage being dark green, and sensitive to the touch, forms a happy contrast with the flowers. It belongs to the natural order *Leguminosæ*: introduced from China in 1800.

*PAPYRUS ANTIQUORUM*; derived from the Syrian *babeer*, whence the Egyptian word *papyrus*, paper: it belongs to the

natural order *Cyperaceæ*. It succeeds well if planted in a loamy soil, in a cistern of good depth, and produces its apetalous flowers in great luxuriance. It is from this plant the Egyptians made their paper, which was obtained from the pellicle between the flesh and bark of the thickest part of the stem, pressed and dried. Introduced from Egypt in 1803.

*NYMPHÆA CÆRULEA*, a very ornamental plant, decking the aquariums of our stoves with its bright azure blue flowers, which it produces in abundance, if planted in a loamy soil with a gentle heat, and kept constantly immersed in water. It succeeds also nearly as well in a pond in a warm situation; but if the season be cold during the time of the expansion of its flowers, they seldom or ever expand so well as in a warm close atmosphere. This beautiful plant derives its name from *Nymphe*, a water nymph habitation, and belongs to the natural order *Nymphaeaceæ*. Native of Egypt, introduced in 1792.

*VALLISNERIA SPIRALIS*, named in honour of Antonia Vallisneri, an Italian botanist. This curious and remarkable water plant grows with great luxuriance if potted in light turfey loam, and placed in deep water in a warm atmosphere; but succeeds nearly as well in a conservatory or greenhouse. It requires to be kept cool and dry during winter, and removed to the stove in February, which causes it to produce its richly tinted brown flowers in greater luxuriance, than if kept in heat during the winter. It belongs to the natural order *Hydrocharaceæ*, and is indigenous to the South of Europe.

*PONTEDERIA CRASSIPES*. This is an elegant plant, from its singularly formed, thick petioles, bright green, smooth, cordate foliage, and spikes of lovely blue flowers. It seems almost to despise the material in which most other varieties of aquatic plants rejoice, and floats about, regardless of any fixed station in the element to which it is naturally consigned, but succeeds well if potted in rich loamy soil, and placed in shallow water in a stove. It is named in honour of Julius Pontedera, a professor of botany at Padua; and belongs to the natural order Pontederaceæ. Introduced from Guiana in 1825.

*ELODEA GUIANENSIS*, from *Elodes*, a marsh, which is its natural situation. It produces its white and conspicuous flowers about the beginning of August, in a light loamy soil, where heat is kept up. Introduced from Guiana in 1820: it belongs to the natural order *Fluviales*.

**PARKERIA PTEROIDES**, named in honour of C. S. Parker, who first discovered this fern-like plant in Essequibo: its flowers are dark brown, in a short whorl; and although they are minute, yet its serrated pinnate leaves render it somewhat interesting. It succeeds well in loam and peat with the roots only immersed in water; it belongs to the natural order *Polypodiaceæ*.

**HYDROLEA SPINOSA**. This minute plant represents the order *Hydrolaceæ*; and its flowers vie with the intense blue of the empyrean. The stem and foliage are decked with numerous spines, as a protection to the charming buds which raise their graceful form above them. It grows most luxuriantly in a loamy soil, in shallow water, and placed in a stove where heat is maintained. Its name is derived from *hydror*, water, *elaia*, oil. Introduced from South America in 1791.

**VICTORIA REGINA**.—This is the most difficult to procure, and most majestic in appearance: it flowers in January in its native country, Guiana. It was discovered by Sir R. H. Schomburgk, in 1837; he describes it as “a vegetable wonder.” Its immense leaves are from 6 to 7 feet in diameter, salver-shaped, with a broad rim of a light green above and vivid crimson below. Its flowers, resting upon the water, are in character with its leaves, consisting of many hundred petals passing in alternate tints from pure white to rose and pink, about 15 inches across. The leaf on its surface is bright green, in form orbiculate; the stem of the flower is an inch thick near the calyx, and is studded with sharp elastic prickles, about three quarters of an inch in length; the calyx is four-leaved, each leaf upwards of 7 inches in length, and three in breadth; they are thick and white inside, reddish brown and prickly outside; the diameter of the calyx is 12 or 13 inches. The magnificent flower, when fully developed, resting upon the calyx, completely covers it with its hundred petals; when it first opens, it is white with pink in the centre, which spreads over the whole flower as it advances in age; it is generally pink on the second day after its expansion: as an enhancement of its remarkable beauty, it is also sweet-scented.

#### HARDY AND BRITISH SPECIES.

The aquatic plants which are cultivated in British aquariums possess considerable and peculiar attractions. The purple of *Butomus umbellatus* gives an imposing effect to British ponds,

while the elegant form of *Hottonia palustris*, "the naiad of the stream," enlivens many a month with its rosy flowers peeping from among the sedge, and the dead leaves of grasses by which it is environed. *Menyanthes trifoliata* again decks the margin of our English ditches with its interesting and lovely flowers, while the *Richardia aethiopica*, or *Calla aethiopica*, from the remarkable purity of its wax-like flowers, fixed on their long elastic stems, wave in graceful motion by the summer's evening zephyr reflected in the mirrored surface of the water.

The situation best adapted for hardy aquatics is found to be in accordance with the height attained by them; and according to this feature, so must the depth of water be regulated in which they are to be immersed: thus the *Richardia aethiopica*, *Nymphaea alba*, and *Nuphar lutea*, require a depth of from one to two feet, while the *Caltha palustris*, *Hydrocharis morsus-ranae*, *Sagittaria sagittifolia*, *Acorus Calamus*, *Butomus umbellatus*, *Zannichellia palustris*, &c., should be planted from 6 to 12 inches from the surface of the water; *Hottonia palustris*, *Menyanthes trifoliata*, and *Aponogeton distachyon*, should be potted, and the pot fixed so as to be half immersed in the water. After the blooming season of the *Aponogeton* is over, and the leaves look yellow, they may be taken up and dried, and again excited in the following March. *Stratiotes aloides*, which is one of the most curious indigenous aquatics, should also be kept with half the pot under water.

As some arrangement is requisite for plants of this description, it is desirable that ledges should be made in ponds or tanks where these plants are to be grown for them to be placed upon, according to their height, and also for the blending of their colours: the low growing varieties, being generally the more tender, should, for this reason, as well as to preserve a more systematic appearance, be placed at the margin, while those of larger growth and greater altitude should be planted towards the centre. The situation for *Nymphaea alba* and *Nuphar lutea* should be either in ponds or fast currents; the two, planted together at the edge of a waterfall, will blend their noble flowers in rich luxuriance amidst the surging foam of the surrounding water. Most of the other species prefer a shady situation, and are to be found in Nature's untrodden wilds,

"Far from the busy haunts of man;"

shedding their florets of varied hues in gay profusion, as if emanating from the lucid bosom of the water from which they partially derive their sustenance, and diffusing a pleasing lustre over the margin of the willow-shaded pond.

*Pine Apple Nursery, March 12th, 1845.*

## GLOSSARY OF TERMS USED IN BOTANICAL DESCRIPTIONS.

( *Continued from p. 177.* )

**CADUCOUS.** Falling off soon, when one part arrives at maturity and decays much earlier than the associated organs. The term is generally most applicable to the inferior parts of a flower, as the sepals and bracts.

**CÆSIOSUS.** Of a greyish tinge.

**CÆSPITOSE.** Disposed in crowded turf-like little tufts.

**CALAMUS.** A hollow stem without joints, like that of the common rush.

**CALATHIDIUM.** Synonyme for Anthodium.

**CALCARATE.** Spurred, when the tube of a flower is lengthened at the base beyond the foot-stalk, and terminates in a point, as in *Tropæolum*.

**CALCAREUS.** Of a dull white, the colour of chalk.

**CALCAREOUS.** Containing chalk, or growing on it.

**CALCEOLOATE** — **CALCEIFORM.** Assuming the form of a shoe.

**CALLI.** Rough hard protuberances.

**CALLOUS.** Of a hardened uneven surface.

**CALYCATUS.** Having a remarkably large calyx.

**CALYCINE.** Pertaining to the calyx.

**CALYCALATED.** When bracts are placed so as to resemble an additional calyx.

**CALYPTERA.** A veil or pointed covering, literally an extinguisher.

**CALYPTRATE.** Furnished with a Calyptre.

**CALYX.** The outermost covering or whorl of the perianth, usually green and more persistent than the corolla, for

which, however, it is sometimes mistaken, when highly-coloured, as in the Tulip.

**CAMARA.** When the pericarp or seed-vessel is formed of two connected valves containing one or more seeds, as in the Apple.

**CAMBIVUM.** An aqueous secretion found next the bark of dicotyledonous trees; in spring it is highly viscous, and may be regarded as the vital fluid of the plant.

**CAMPANULATE.** Bell-shaped.

**CANALICULATE.** Having longitudinal furrows.

**CANCELLATE.** Lattice-shaped.

**CANDIDUS.** Pure opaque white.

**CANESCENT.** Hoary, applied to the downy covering of leaves and stems which have a grey colour.

## LIST OF NEW PLANTS.

### BEGONIACEÆ. — *Monacia Polyandria*.

*Begonia Martiana.* With the exception of *B. coccinea* and one mentioned by Mr. Hartweg, there is perhaps no species of *Begonia* yet known that produces flowers of a finer colour than the present. Most of the members of the genus have blossoms varying from a pure white to a pale plush; but in the species before us, we have a rich and delicate crimson pink. The stems are beautifully striated and transparent, like those of the Balsam, and are clothed with neat foliage of a rather diminutive size. The blossoms are large, and sufficiently abundant to impart a most inviting aspect, and the smallness of the leaves only becomes a fault when the plant is kept in a dry atmosphere, or otherwise mismanaged during the growing season. It is a native of Brazil, and was introduced in 1829. — *Pax. Mag. Bot.*

### COMPOSITÆ. — *Syngenesia Superflua*.

*Cineraria.* Eight seedlings. No. 1. Lady Prudhoe, a fine large, broad-petaled, deep blue flower. No. 2. Countess of Zetland, an equally fine crimson variety, both of the production of Messrs. Jackson and Co., of Cross Lanes Nursery, Bedale, Yorkshire. And six others: Fairy Queen, white; Emperor of Russia, crimson tipped white; Sapphire, bright cerulean blue; Criterion, blue tipped white; Surrey Hero, crimson; and Desirable, crimson tipped white; from the collection of Mr. Ivery, Peckham; all excellent flowers, of first-rate properties. — *Pax. Mag. Bot.*

### ONAGRACEÆ. — *Octandria Monogynia*.

*Fuchsia serratifolia.* A new and beautiful species from Peru, introduced by Messrs. Veitch, of Exeter. The large leaves are of a deep rich indigo green. The flowers are between two and three inches long, of a very deep clear rose colour, most intense at the bottom, becoming paler upwards, and

at last melting into a delicate green at the end of the scpals. The petals are of the most vivid vermillion. Although the flowers appear singly from the axils of the leaves, yet their size is such as to render them very conspicuous objects; and moreover it appears probable that every leaf will produce its flower.—*Bot. Reg.* 41—45.

MAGNOLIACEÆ. — *Polygamia Monæcia*.

*Tasmannia aromatica*. A hardy greenhouse evergreen shrub, from Van Diemen's Land; it possesses but little attraction, having dull purple branches and small dead green leaves; the flowers, too, are rather inconspicuous, small, white, faintly marked with pink. Every part of the plant, however, is highly aromatic and pungent to the taste. The fruit is occasionally used by the settlers as pepper.—*Bot. Reg.* 43—45.

AMARYLLIDACEÆ. — *Hexandria Monogynia*.

*Callipræche eucrosioides*. A very curious bulbous plant, from St. Blas or S. Felipe, on the west coast of Mexico, having dull scarlet flowers, chiefly remarkable for the great length of the green filaments which support the stamens; these are nearly five inches long, and appear, from their weight, to depress the flowers, and, after their protrusion from the limb of the flower, curve upwards, imparting to the whole a most grotesque appearance. The plant usually blossoms before the leaves are produced. It seems to like shade and heat, and flowers in the month of March.—*Bot. Reg.* 45—45.

SELAGINACEÆ. — *Didynamia Angiospermia*.

*Selago distans*. A very pretty little greenhouse plant of easy culture, and very desirable on account of its early and long continuance in flower; the great peculiarity of this species is its loose spikes of delicately-tinted white flowers, produced all over the plant, and the small, slender, downy leaves, which are solitary on the young branches and fascicled on the old ones. A peculiarity in its culture is, that it should be repotted about the beginning of August, so as to have it well established before winter; for, if repotted in spring, its flowering will be retarded, or entirely prevented. During the summer an ample supply of water should be given to its roots; and in hot weather it must be syringed over head, night and morning.—*Bot. Reg.* 46—45.

GESNERACEÆ. — *Didynamia Angiospermia*.

*Achimenes argyrostigma*. Among many novelties sent by our collector for the Royal Botanic Gardens from the Sierra Nivada de Sta. Marta in New Grenada, is the present highly-interesting plant. The leaves are peculiarly beautiful, of a rich, velvety dark green, with a tinge of purple, spotted with white, as in *Begonia argyrostigma*. The flowers are white or cream-colour, spotted with red; and, though individually small, yet, being produced numerously on long spikes (which are also numerous), and continuing in beauty for a long period, the plant is likely to become a favourite. It requires the treatment usual for the genus.—*Bot. Mag.* 4175.

ACANTHACEÆ. — *Didynamia Angiospermia*.

*Porphyrocoma lanceolata*. For the possession of this truly charming stove plant, the Royal Botanic Gardens are indebted to Mr. Forkel, Gardener to His Majesty the King of the Belgians, at Brussels, who sent it under the above name, but unfortunately without any history. It produces singularly richly-coloured spikes of deep purple, from within the scales of which the scarcely less brightly coloured (but more inclined to blue) flowers appear.

It was exhibited in the Horticultural Society's rooms, and excited admiration from the beauty of the blossoms, which consist in the dark purple comb-like parts half covering the Lamium-like violet flowers. The leaves are large and drooping, of a lanceolate form, and dark green; the plant continues flowering during the spring and summer months. — *Bot. Mag.* 4176.

**LOBELIACEÆ. — *Pentandria Monogynia*.**

*Siphocampylos coccineus*. This is perhaps the most beautiful of the genus which has yet been introduced to our stoves. It was sent from the Organ Mountains, Brazil, by Mr. W. Lobb, one of the botanical collectors of Mr. Veitch, in whose nursery at Exeter it first showed its large and scarlet flowers, in June, 1845. It is treated as a stove plant, and, as cultivated by Mr. Veitch, is not sparing of blossoms. — *Bot. Mag.* 4178.

**CACTACEÆ. — *Icosandria Monogynia*.**

*Echinocactus myriostigma*. One of the most singular of the curious family of *Cactaceæ*, and still considered a rarity in collections; first described by Lemaire in 1839, but from very imperfect specimens, of which even the native country was not known, but which presented such remarkable characters, independent of flowers and fruit, that he ventured to constitute of it a genus, under the appropriate name of *Astrophytum*. The flowers, however, (for we are still ignorant of the fruit,) seem to present no characteristic marks to distinguish it from *Echinocactus*, and I venture to follow the Prince de Salm-Dyck in considering it to form a section of that extensive genus which he has called *Asteroidei*. We owe the possession of our specimen in the Royal Gardens to F. Staines, Esq., of San Luis Potosi, Mexico. The plant, eventually attaining a height of a foot, and probably more, is at first rotund, in age becoming more oblong, umbilicated at the top, the sides formed of five or six deep furrows, and as many broad projecting angles; the whole surface covered with white, scale-like dots, which, when carefully examined, are seen to be formed of matted and, as it were, interwoven hairs. The keel of the angles is not sharp, but flattened, as if cut off with a knife; and this is occupied by closely-placed transversely-oblong areola, filled with a floccose substance, but bearing no spines. In the umbilicus alone, whence the flowers appear, there are a few small brown rigid setæ rather than spines. The flowers are aggregated at the top of the plant, rather small, of a delicate straw-colour, sepals closely imbricated, oblong, tipped with a black point and a mucro; petals resembling them, but longer, arranged nearly in one series, linear, acute, but not mucronate nor sphaelate at the tip. — *Bot. Mag.* 4177.

**ORCHIDACEÆ. — *Cynandria Monandria*.**

*Epidendrum radicans*, syn. *E. rhizophorum*. This elegant species belongs to that section of *Epidendrum* named *Amphiglottium* distinguished by "the long leafy stem with distichous leaves, the want of every tendency to form pseudo-bulbs, a terminal peduncle covered with close sheaths, and a labellum entirely united to the column." Its name is obtained from the singular circumstance that the plant produces a root upon the stem opposite each leaf. The first plants were received in England in 1839 from Guatemala. Mr. Skinner says its habit is terrestrial, growing among long grass and dried leaves. It is a lovely plant, with dense heads of bright vermillion and yellow flowers. — *Pax. Mag. Bot.*

*Bolbophyllum umbellatum*. A pretty species, from Nepal. It has pale straw-coloured flowers, spotted with purple. Originally found in 1821. — *Bot. Reg.* 44—45.





## ON PELARGONIUMS.

WITH AN ENGRAVING OF LYNE'S MARMION AND LYNE'S HESPERUS.

IN the course of the past season we had an opportunity of introducing a continental friend to one of the metropolitan exhibitions, and the visibly portrayed expression of astonishment which pervaded his countenance when the beautiful scene first opened on his sight is still present to us. Indeed, it is questionable who received the most gratification; our friend, from the grand, and to him novel, display of floral treasures which surrounded him, or ourselves, from his reiterated exclamations of surprise and admiration. But the splendour of those magnificent Pelargoniums I shall never forget, he afterwards remarked; they were perfect! And so thought the greater number of those who saw them; all indeed, except the florist: his insatiable desire of novelty and improvement leads him continually to seek the one or the other, and sometimes, by chance, to hunt for faults where it is hardly possible to believe they exist; be that as it may, we cannot conceive a reason sufficiently good to account for the exclusion of several existing strains of colour on the Pelargonium from the florist's stock: why the white, lilac, and plum-coloured varieties should not be thought worthy of attention, we are at a loss to imagine. That they would as readily yield to the same care, and improve in shape to the same extent, as the crimson and rose-coloured varieties have done, there can be no doubt; nor can there be any hesitation about the additional attraction a collection would present with so many more colours in it. The Royal Botanic Society have already done much towards giving a direction and impetus to the production of a new strain of these flowers, by offering prizes for kinds possessing the form and character of the usual fancy varieties and the colour of the common scarlet,—a most desirable change certainly, and one that is sure to entail some richly-coloured flowers; and we should be glad to see the matter carried still farther, so as to entirely break up the present monotonous character of the family, which must be admitted, even by the most ardent ad-

mirer, to be the great drawback to their otherwise "perfect" beauty, and a probable reason for their yet comparatively limited cultivation.

Varieties of the colours we have mentioned are easily procured, and a commencement might be made even in the present season, by obtaining seed from any or all of them, for they are late flowerers; and being generally allowed to bloom as they will, there would be little trouble in finding plants in a fitting condition. The seed, we think, will be more likely to produce the desired result, if kept clear of all cross impregnation, as it is the colours of existing kinds that is wanted, combined with some better forms: the latter point must be a work of time, and will be gained in the usual way, by selecting the best among the seedlings when they flower. We repeat our opinion, that it is likely the colours will be preserved with greater purity by this mode, than if a cross of other colours be made, and for this reason should prefer it, even though the mixing promise a more speedy improvement in shape: still in another season it may not be amiss to try some cross-breeds between the best formed flowers and others of the desired colours; every advance, or even alteration, in the direction pointed out, ought to be regarded with eyes of favour, until it will become necessary to apply the rigorous test to which the prevailing strain are now subject.

It is not likely, however, that those who have passed years in the untiring pursuit of fine flowers according to the present taste will give them up to begin *de novo* upon another colour. This would require too great a stretch of patience and philanthropy for even a florist; and we do not expect it of them. Let those who have the means continue to produce as they are now doing; but for the beginner, whose chance of competing with the more established raiser is so remote, this suggestion holds forth the most flattering hopes. He may thus strike out for himself an entirely new line of operations, in which all will start equally, and it is of him we must expect whatever may result.

Our illustrations this month are two seedlings of, we believe, 1845, raised by Mr. Lyne. No. 1. Marmion, is a flower of excellent properties, the dark crimson feathered upper petals, softening to a much paler margin, contrast prettily with the white centre and rosy under petals. No. 2. Hesperus, has also

dark maroon upper petals, terminating in a crimson margin, relieved by the thick rosy lilac under petals. The stock of them is in the possession of Mr. W. E. Rendle, nurseryman, &c. of Plymouth.

ED.

## FLORAL INTELLIGENCE.

## HORTICULTURAL SOCIETY OF LONDON.

SATURDAY, June 21st, was the day of the second exhibition of this Society, when a most brilliant gathering occurred. The large gold medal was awarded to Mr. Barnes, for the best collection of forty stove and greenhouse plants, which were considered by all to be the most remarkable group of well-grown plants ever brought together. Several among them were truly magnificent, particularly the Clerodendrons; one plant of *C. paniculatum* was a wonder, the spike of flowers measuring three feet in height, and rather more in circumference at the base; the plant itself must have been fifteen or twenty feet round. *C. Kämpferi*, *C. squamatum*, *C. splendens*, and *C. fallax*, were all present in admirable order, as also excellent plants of the following:—*Polygala oppositifolia*, *Ixora rosea*, *Boronia denticulata*, *Pimelea decussata*, *Stephanotus floribundus*, *Rondeletia speciosa*, *Phænocoma prolifera*, *Erica elegans*, *E. odora rosea*, *E. dilecta*, *E. Thunbergiæ*, *E. Plunkettii*, *E. ventricosa*, and *E. tricolor* in several varieties, *Leschenaultia formosa*, and *Epacris grandiflora*, &c.

The second collection of a like number was sent by Mr. Robertson. In the collections of twenty species Mr. Frazer obtained the first with a very neat group containing *Boronia serrulata*, *Aphelexis humilis*, and *A. speciosa*, *Gompholobium splendens*, *Coleonema tenuifolium*, *Burchellia capensis*, *Gloxinia Youngii*, *Polygala acuminata*, *Pimelea hispida* and *decussata*, several *Ericas*, &c. Mr. Ayres had the second twenty.

There were several collections of twelve plants. The best was from Mr. Bruce, who had *Adenandra fragrans*, *Ixora grandiflora*, *Boronia serrulata*, *Eutaxia pungens*, *Aphelexis humilis* and *sesamoides*, *Euphorbia splendens*, and some good *Heaths*. The second group was from Mr. Green; and the

others from Mr. Jack, gardener to R. G. Loraine, Esq., and Mr. Slove, gardener to W. R. Baker, Esq.

The collections of six held some excellent specimens, particularly those sent by Mr. May. They were *Rondeletia speciosa*, *Ixora grandiflora*, *Aphelexis purpurea*, *Sprengelia incana*, *Leschenaultia formosa*, and *Erica ventricosa superba*. The second collection was forwarded by Mr. Falconer, and others by Mr. Epps, Mr. Stanley, Mr. Cole, Mr. Glendinning, and Mr. Taylor.

The first prize for twenty Heaths was awarded to Mr. Robertson: among them were perfect bushes of *E. radiata*, *ventricosa carneae*, *Cavendishii*, *depressa*, *ovata grandiflora*, *perspicua nana*, *tricolor*, &c.

In the Nurserymen's class for the same number, the best collection was sent by Messrs. Fairbairn; in it were fine plants of *jasminiflora alba*, *Halicacaba*, *tricolor*, *Savilleana*, *ventricosa breviflora*, &c., the beauty of the whole materially increased by the presence of that extraordinarily fine specimen of *Cavendishii* of which they are the fortunate possessors. A third collection of twenty was shown by Messrs. Rollison.

Groups of twelve Heaths were present from Mr. Green, Mr. Barnes, and Mr. Taylor. Mr. Green's collection had *pendens*, *ventricosa alba*, *Cavendishii*, *Beaumontia*, *tricolor*, &c.

Collections of twelve were also shown by Messrs. Veitch and Mr. Frazer in the Nurserymen's class. The former group contained, among others, *Cavendishii*, *tricolor*, *metulæflora*, *Alberti rosea*, *Halicacaba*, *densa*, &c.

Collections of six were sent by Mr. May, Mr. Bruce, Mr. Jack, Mr. Dawson, Mr. Epps, and Mr. Glendinning. Mr. May also contributed a splendid plant of *Massonii*, which received the first prize for superior cultivation, and Mr. Dawson's *pulverulenta*, a singular pyramidal plant, the second.

The large gold medal was awarded to Mr. Mylam for the best collection of twenty species of Orchidæ. These plants were truly magnificent; the most beautiful among them were *Stanhopea tigrina* with fourteen flowers, *Saccolabium guttatum* with nine spikes, *Aerides odoratum major*, bearing twenty-four spikes, *Paphinia cristata*, *Oncidium leucochilum* and *pulvinatum*, *Odontoglossum grande*, *Brassia Wrayæ* and *Lanceana*. A second collection was sent by Mr. Robertson, and a third by Messrs. Rollison.

A group of twelve was exhibited by Mr. Don, containing, among others, *Sobralia macrantha*, *Stanhopea quadricornis*, *Cattleya superba*, *Anguloa* sp., *Scomburgkia tibicinis*, *Barkeria spectabilis*, &c. Mr. Eyles exhibited the best six; among them were both varieties of *Vanda Roxburghii*, *Oncidium pictum*, and *Brassia Lanceana*. Messrs. Veitch sent the second six.

Of single specimens Mr. Barnes sent *Aerides odoratum* and *Cypripedium spectabile*, and Mr. Eyles produced two new *Aerides*, one allied to *A. crispum* and the other with rich violet-purple flowers, approaching to *A. affine*.

Tall Cacti were produced by Mr. Green, Mr. Falconer, and Mr. Robertson. Mr. Green had densely-bloomed plants of *Epiphyllum Jenkinsonii multiflorum*, *E. speciosum*, *E. coccineum majus*, *Cereus concolor*, *C. speciosissimus flagelliformis*, &c.

A collection of six *Achimenes* were sent by Mr. Jack, and six beautiful species of Cape Pelargoniums by Mr. Stanley. Single specimens were both numerous and fine: among those of new or rare kinds the most remarkable was *Gardenia Stanleyana*, from Mr. Glendinning. *G. Rothmannii*, another rare species, very fragrant, was forwarded by Messrs. Veitch, who had also a new *Hoya* with lemon-coloured flowers, called *H. trinervis*. Mr. Elliott, gardener to J. B. Boothby, Esq. sent a beautiful succulent plant, with flesh-coloured flowers, called *Plumieria acuminata*: *Dipladenia crassinoda* was present from Mr. Jack and Mr. Robertson. Messrs. Rollison sent *Pitcairnia punicea*, and Messrs. Veitch *Morina longiflora*. Specimens of superior cultivation were produced; the first by Mr. May, an immense plant of *Erica vestita coccinea*; *Aphlelexis humilis*, from Mr. Bruce; *Pimelea decussata*, Mr. Hill; *Cyrtoceras reflexum*, J. B. Creswell, Esq.; *Achimenes multiflorum*, Mr. Ayres; *Chorozema ovata* and *Lisianthus Russellianus*, Mr. Green; *Lilium testaceum*, Messrs. Mountjoy; *Thysanotus* sp., Mr. Stanley; *Blandfordia grandiflora* and *Clerodendron squamatum*, from Mr. Barnes, and several others.

The Roses in pots were not quite equal to former exhibitions. The best collection was from Messrs. Lane, who had *Hybrid China*, *Duke of Devonshire*, *Bride of Abydos*, *Bourbon Psyche*, *Tea Antinöus*, *Mirabilis*, *Abbe de Lamballe*, *General Vallee*, *Marie Augustine Hersente*, *Silene*, *Princesse Marie*, &c. The other collections were from Messrs. Paul, Mr. Laing, and Mr. Dobson. The cut roses were fine, and too numerous to mention.

The Pelargoniums formed an important feature in the exhibition. In the first class for new flowers there was a fine display ; and those from Mr. Dobson were very good. This collection, composed of seedlings of 1844, contained the following :—Mustee, Desdemona, Arabella, Rosy Circle, Aurora, Zenobia, Isabella, Marc Antony, Favorite, Hero, Bellona, and Sunset. The second collection was produced by Mr. Cock ; it comprised Duke of Cornwall, Hector, Cora, Magog, Cyrus superb, Queen Phillippa, Emma, Pulchellum, Eliza Sauvage, Shepherdess, Vixen, and Sarah. The third collection was from Mr. Staines, and contained Sir W. Scott, Staines's Cedric, Adonis, Merry Monarch and Andromache, Witch, Sunrise, Fair Maid of Seyton, Sir R. Peel, Duke of Wellington, Emperor Nicholas, and Superbum. The only nurseryman who exhibited in this class was Mr. Gaines ; he had Rose of Arragon, Prince of Wales, Princess Alice, Ackbar, Princes, Don Juan, Fire King, Lord J. Russell, Surrey White, Pirate, Oberon, and Mogul. In the amateur's class for old varieties the prizes were taken, first by Mr. Staines, second by Mr. Dobson, and the third by Mr. Cock, Mr. Gaines taking the first prize in the nurserymen's class. In the class for Pelargoniums in six varieties the prizes were awarded to Mr. Bromley and Mr. Gaines.

Calceolarias were not numerous. The first prize was awarded to Mr. Stanley for British Queen, Fortune Teller, King of Surrey, Othello, Emperor of Russia, and Othello. Mr. Gaines received the first prize among nurserymen.

Pinks were shown by Mr. Wilmer and Mr. Henbrey ; the latter collection contained Henbrey's Beauty, Sir R. Peel, Neville's Earl Stanhope, Mellona, Wilson's Jack, Diamond, Gem, Prince Albert, Coronation, Marshall's Defiance, and thirteen Seedlings.

Ranunculuses were shown by Mr. Betteridge, of Abingdon, and Mr. T. Starr, Airzee. Mr. Tyso was the only florist who exhibited ; his stand contained Tippoo Saib, Victor, Vendome, Innocent, Glenelg, Edgar, Dilectus, Champion, Cathcart, Attractor, Arbitrator, Alexis, Queen Victoria, Princess Royal, Philocles, Passe Cour de France, Niobe, Mirabile, Glacia, Burns, Financier, Belle Agreeable, and Apollo : besides these he had a fine collection of one hundred varieties.

Seedlings were not so numerous as on former occasions. Among Pelargoniums the first prize was awarded to Mr. Beck, for Aurora, a seedling 1844, upper petals dark, light centre,

and under petals rosy-crimson; second, to the same for Desdemona, a profuse bloomer, and new in character, upper petals bright maroon, with a narrow edging of pale pink, centre and under petals pale rose. Mr. M'Conack received a certificate for Gulnare, upper petals dark, white centre, and rosy under petals. Certificates were also given to Mr. Beck for Sunset, Juno, and Mustee, three desirable flowers. Of seedlings of 1845 two were selected, Competitor and Rosetta, also from Mr. Beck. Among Calceolarias Mr. Gaines's Compacta, and The Pet from Mr. Standish, received certificates. Others were given to Mr. Pearson, of Hampstead, for a white Verbena, named Avalanche; and to Mr. Henbrey, for a seedling pink, named Beauty.

- The last exhibition for the season of the Horticultural Society took place on the 12th of July, and a very excellent display for the advanced period of the season was brought together.

In the class of 40 Stove and Greenhouse Plants, Mr. Barnes, gardener to G. W. Norman, Esq., of Bromley, again obtained the Large Gold Medal, with a collection evincing the highest cultivation; his Clerodendrons certainly surpassed any thing of the kind ever produced before. There were six specimens present in the most beautiful condition, besides splendid plants of Rondeletia speciosa, Epiphyllum splendens, Crowea saligna, Polygala grandiflora, Pentas carnea, Aphelexis humilis, Phœnocoma prolifera, Leschenaultia biloba and formosa, Erica am-pullacea, E. jasminiflora alba, E. Plunkettii, and several others.

Mr. Robertson, gardener to Mrs. Lawrence, Ealing Park, obtained the second prize in the same class. The Gold Knightian Medal was given to Mr. Frazer, nurseryman, Lea Bridge Road, for a collection of 20 particularly neat and well-grown plants, containing Roellia ciliata, Tristania nerifolia, Gompholobium splendens, Burtonia conferta, Clerodendron fallax, Kalosanthes grandiflora miniata, a beautiful plant, together with several Heaths. The second prize for a like number of excellent plants was taken by Mr. Ayres, gardener to J. Cook, Esq., of Blackheath.

There were fine collections of 12 plants. Mr. Hunt, gardener to Miss Trail, of Bromley, was placed first; in his group were fine specimens of Gardoquia Hookerii, Ixora coccinea, Boronia serrulata, Russellia juncea, Erica Massonii, &c. The other col-

lections were from Mr. Bruce, gardener to B. Miller, Esq., Tooting; Mr. Green, gardener to Sir E. Antrobus, Bart., Cheam; Mr. Epps, of the Bower Nursery, Maidstone; Mr. Steadman of Isleworth; and were respectively placed as we have named them.

Two collections of 6 were present from Mr. May, gardener to E. Goodheart, Beckenham; and Mr. Stanley, gardener to H. Berens, Esq., Sidcup.

A group of Stove and Greenhouse Climbers were exhibited by Mr. Frazer; they were *Ipomaea tyrianthina*, *Allamanda cathartica*, *Clerodendron splendens*, *Sollya linearis*, *Manettia glabra*, and *Stephanotus floribundus*.

Single specimens of superior cultivation were present in great variety. Silver gilt medals were given to Mr. Falconer, gardener to A. Palmer, Esq., Cheam, for *Renanthera coccinea*, having two panicles of expanded flowers, and a third in a younger state; and to Messrs. Veitch of Exeter, for *Aerides odorata*. Large silver medals were given to Mr. Kinghorn, gardener to A. Murray, Esq., Twickenham, for *Veronica speciosa*; to Mr. May, for *Erica radiata*; to Mr. Frazer, for *Kalosanthes grandiflora miniata*, a magnificent plant, about 3 feet high, bearing about 160 heads of flowers; to Mr. Dawson, of Brixton, for *Erica ampullacea*; and to Messrs. Rollison, Tooting, for *Erica inflata alba*. Silver Knightian medals were obtained by Mr. Stanley, for a large plant of *Leschenaultia formosa*; by Mr. Green, for *Lisianthus Russellianus*; and by Mr. Dobson, gardener to G. Beck, Esq., Isleworth, for *Achimenes picta*. Certificates were given to Mr. Ayres, for a seedling *Clerodendron*; and to Mr. Barnes, for *C. paniculatum*. There were present several new ornamental plants. Messrs. Veitch received the silver-gilt medal for their *Fuchsia serratifolia*; the large silver for *Siphocampylos coccineus*; the Silver Knightian for *Calendrinia umbellata*; and the Silver Banksian for *Atropa* sp. from Chili, a small suffruticose spreading plant, with long tubular axillary pale yellow flowers. A certificate was given to Mr. Glendinning, of the Chiswick Nursery, for a yellow and white flowering herbaceous *Statice*, called *bicolor*. Besides these there was a plant of *Alona cœlestis*, from Messrs. J. and J. Best, of Reading Nursery, and *Erica Halfordiana* from Messrs. Rollison, a variety with large *ampullacea*-like flowers, and somewhat of the habit of *retorta*.

The Orchidaceæ were numerous, and, as usual, very beautiful ; the principal prize was again taken by Mr. Mylam, gardener to S. Rucker, Esq., Wandsworth, with a splendid collection containing *Anguloa uniflora*, *Miltonia spectabilis*, *Odontoglossum grande*, *Paphinia cristata*, *Galeandra Bauerii*, *Saccolabium guttatum rubrum*, several *Cirrhæas* and *Oncidiums*, *Promenæa stapelioides*, and, perhaps, the finest specimen of *Phalænopsis amabilis* that has yet been seen.

Mr. Robertson took the second prize with a very good collection, holding, among others, fine specimens of *Angræcum caudatum*, *Mormodes aromaticum*, *Brassia Wrayæ*, *Oncidium Lanceanum*, *Stanhopea oculata*, *Aerides quinquevulnera*, *Catasetum Russellianum*, &c.

Messrs. Rollison obtained the Gold Banksian for the third collection. Mr. Don, gardener to F. G. Cox, Esq., Stockwell, was the only exhibitor in the class for 12 species. His collection held *Schomburgkia tibicinis*, *Catasetum Russellianum*, *Aerides quinquevulnera*, *Stanhopea saccata*, *S. insignis*, *Acropæra Loddigesii*, &c. There were three collections of 6. The Gold Banksian Medal was given to Mr. Carson, gardener to F. G. Farmer, Esq., Cheam, for *Miltonia spectabilis*, *Dendrobium chrysanthum*, *Cattleya Mossiæ*, *C. Harrisoniæ*, *Oncidium Lanceanum*, and *Epidendrum fragrans*. The Silver Gilt was obtained by Mr. Eyles, gardener to Sir G. Larpent, Roehampton, with *Calanthe plantaginea*, *Acincta Barkerii*, *Aerides affine*, *Acropæra Loddigesii*, and *Oncidium Lanceanum*. The Large Silver was taken by Mr. Plant with *Saccolabium guttatum*, *Brassia Lanceana*, *Vanda cristata*, *Cynoches Loddigesii*, and *Cirrhæa fusco-lutea*.

In the amateurs' class, for 20 Cape Heaths, Mr. Hunt obtained the first prize with an excellent collection, containing large plants of *E. Massonii*, *E. eximia*, *E. mutabilis*, *E. odora rosea*, *E. obbata*, *E. tricolor elegans*, *E. jubata*, *E. metulæflora bicolor*, &c. The silver-gilt was given to Mr. Robertson for a collection of smaller but very neat plants. In the nurserymen's class, Messrs. Fairbairn obtained the first prize with a superb collection, containing *Cavendishiana jasminiflora alba*, *ampullacea rubra*, *eximia*, *gemmifera*, *Irbyana*, *ampullacea*, &c.

Messrs. Rollison received the second prize in the same class. In that for 12 plants (amateurs), the Gold Banksian was awarded to Mr. Green for large plants of *tricolor*, *metulæflora*

bicolor, ampullacea, jasminiflora alba, and some smaller ones. The second prize in this class was taken by Mr. Barnes. In the nurserymen's division the Gold Banksian was given to Mr. Frazer, the only exhibitor. The collections of six species were more numerous: the best were exhibited by Mr. May, who had *E. jubata*, *Savilleana*, *princeps tricolor*, &c.: the second was from Mr. Bruce; others were shown by Mr. Plumley and Mr. Ayres. Among nurserymen the competitors were Mr. Dawson, Messrs. Henderson, Mr. Epps, and Mr. Glendinning. In the class for single specimens there were some fine plants: the best was an *E. Parmenteriana*, 3 feet high and 4 feet across, from Mr. May. Mr. Curson sent a fine *E. ampullacea*, which received the Silver Knightian; and the Silver Banksian was given to Mr. Plumley for *E. viridiflora*. In the nurserymen's class Mr. Dawson obtained the first prize for *E. Massonii*, 2 feet high, and 3 feet across; Messrs. Fairbairn the second for *E. ampullacea*, about the same size; and Messrs. Henderson the third for *E. ventricosa grandiflora*.

The Pelargoniums were still good, though smaller than at the last show. In the amateurs' class, for 12 new varieties in 8-inch pots, the first prize was awarded to Mr. Dobson for Pompey, Rajah, Sultana, Isabella, Margaret, Amazon, Sunset, Repealer, Mark Antony, Desdemona, Effect, and Titus. Mr. W. Cock obtained the second with Conflagration, Egyptian Queen, Sunrise, Mary, Repeal, Achilles, Milo, Jessica, Duke of Cornwall, Katinka, Hector, and Rosette. The third prize was taken by Mr. Staines, New Road, who had Clio, La Polka, Andromache, Emperor, Akbar, Nestor, Sunrise, Nova elegans, Duke of Cornwall, Merry Monarch, Black Dwarf, and Queen of Fairies. For 12 old varieties in the nurserymen's class, Mr. Gaines obtained the first prize, and Mr. Ambrose the second. In the amateurs' division of this class, the best was shown by Mr. Cock, and the second by Mr. Staines. Only one collection of 6 was shown by Mr. Cock.

Mr. Conway of Brompton obtained the Silver Knightian for a collection of 6 scarlet Pelargoniums: these were, Prince Albert, Compactum, Tom Thumb, Shrubland, and Shrubland Superb, and Mrs. Mayler.

In the amateurs' class, for 12 roses in pots, the Gold Banksian Medal was awarded to Mr. Stowe, gardener to W. R. Baker, of Bayfordbury, for a collection containing many very nicely-

bloomed plants. Mr. Dobson received the second prize. Messrs. Lane exhibited the best collection in the nurserymen's class of 25 plants: in it were good plants of *Devoniensis*, *Charles Duval*, *Coupe de Hebe* (tea-scented), *Guillaume Tell*, *Comte de Paris*, *General Allard* and *Gallica* (hybrid perpetuas), and the *White Bath Moss*. The second prize was taken by Mr. Steadman. Single specimens were produced by Mr. Slowe and Mr. Dobson; the former receiving a Silver Knightian for *Gardenia*, a *China* variety; and the latter, a Silver Banksian for the *Bourbon Queen*. Collections of 12 *Fuchsias* were shown by Mr. Gaines, Mr. Robinson, and Mr. Steadman. Mr. Gaines had also a collection of 6 *Calceolarias*.

Of Cut Roses there was a good display. The principal exhibitors among amateurs were Mr. Terry, Mr. Parsons, Mr. Betteridge, and Mr. Williams; and among nurserymen, Messrs. Lane, Mr. Rivers, Mr. Francis, Mr. Hooker, and Messrs. Cobbett. Our limits quite preclude the possibility of naming their productions.

A good stand of Carnations was produced by Mr. Norman of Woolwich: among them were blooms of *John's Ringleader*, *Cartwright's Lord of the Manor*, *Martin's Prince Albert*, *Wilmer's Solander*, *Puxley's Prince Albert*, *Wiggs' Earl of Leicester*, *Ely's Mungo* (a good seedling, marked No. 8.), and several other standard flowers. Mr. Edmonds, Wandsworth Road, received the large silver medal for a stand of picotees, containing *Brinklow's New Purple*, *Dickson's Red*, *Crask's Prince Albert*, *Sharp's Agitator*, *Halliday's Henrietta*, *Barnard's Bride*, *Wilmer's Prince Albert*, *Wildman's Isabella*, and several others. The second prize was taken by Mr. J. Newhall of Woolwich. In the dealers' class Messrs. Norman received the first prize, and also for pinks, with a stand, containing, among others, *Weedon's Queen Victoria*, *Kritland's Gay Lad*, *White's Warden*, *Church's Rowena*, *Garrett's Queen of Roses*, *Hardstone's Prince Albert*, *Norman's Henry Creed*, *Kritland's Dr. Dauberry*, *Creed's President*, &c. Mr. Henbrey, of Croydon, received the second prize for a similar collection.

The following seedlings received prizes:—*Pelargonium paragon*, a certificate from Mr. Whomes, already described in the report of the Botanic Society's last show; *Calceolarias*. Certificates were given to Messrs. Best of Reading for *Leopardii*, cream-colour, rosy spots; and to Mr. Gaines for *Alpha*, a yellow ground, with large blotches.

A great many others were present, but did not receive prizes; among them we noticed a promising pelargonium from Mr. Kinghorn, called Mary Queen of Scots; a verbena from Mr. Cutbush of Barnet, called Crimson Superb; an epiphyllum, with bright red flowers, from Mr. Green, named Greenii; a pink from Mr. Henbrey, called Standard; and one from Mr. Norman, the Great Britain: an Antirrhinum from Mr. Wentworth of Harlow, a cream-coloured variety, striped with red and purple; and a Gloxinia from Mr. Stanley, a large white, with bright blue throat.

Under the head of miscellaneous subjects, certificates were awarded to Mr. Carson for *Rondeletia speciosa*, with about 30 heads of flowers; to Mr. Conway for 6 *Petunias*—*Membranacea*, *Sanspareil*, *Beauté Parfait*, *Portrait*, *Ivery's Pet*, and *Louis Gullind*; and to Mr. Burns of Chevening for a pan of the Persian yellow Rose.

#### ROYAL SOUTH LONDON FLORICULTURAL SOCIETY.

THE third meeting for the season of this Society occurred on the 25th of June, at the Surrey Zoological Gardens. This is what is usually called the Pink show, being the season for that flower, and a very fair assemblage of them was present. The first prize in the amateurs' class was taken by Mr. Blest, of Walworth, with a nice stand of the following sorts: Holmes' Coronation, Bunkell's Queen, Hodges' 166, Lady Flora Hastings, Church's Navigator, Hardstone's Prince Albert, Legg's Prince Albert, Hodges' Melona, Wilmer's Prince of Wales, Cousins' Little Wonder, Bunkell's Lord Brougham, Hodges' Gem, and Norman's Defiance. J. Edwards, Esq., of Holloway, obtained the second prize, with Wilmer's Prince of Wales, Hardstone's Prince Albert, Church's Navigator, Bunkell's Lord Brougham, Bunkell's Queen, Cousins' Little Wonder, Legg's Prince Albert, Hodge's Melona, Hardstone's Beauty of Cray, Henbrey's Diamond, Garratt's Prince Albert, and Holmes' Coronation. The third prize was taken by Mr. Proctor, of Bermondsey, with Hodges' Melona, Holmes' Coronation, Hodges' Gem, Unknown, Harrison's Prince Albert, Neville's John Dickson, Bunkell's Prince Albert, Legg's Prince Albert, Henbrey's Diamond, Bunkell's Queen, Church's Navigator, and Barratt's Conqueror.

In the nurserymen's class the first prize was taken by Mr. Norman, of Woolwich, with a stand of 24, containing Church's Wonder, Stow's Elizabeth, Hodges' 166, Cousins' Little Wonder, Wilson's Dame Trot, Omega, Miss Jean, Cole's Majestic, Wilmer's Queen, Hardstone's Beauty of Cray, Ibbett's Queen Victoria, Hodges' Gem, Bunkell's Queen, Lady Flora Hastings, Wallis's Unique, Jones's Huntsman, Neville's John Dickson, Wilmer's Prince of Wales, Church's Navigator, Cousin's Queen of the Isles, Fairbairn's Bob Lawrence, Creed's President, Aker's Lord Brougham, and White's Warden. The second prize was taken by Mr. Henbrey, of Croydon, and the third by Mr. Ottey, of Peckham.

The first prize for 12 Ranunculus (amateurs' class) was awarded to Mr. R. Smith, of Poplar, for Sir J. Graham, Topaz, Seedling, Phenomenon, Naxara, Queen Victoria, Orange Boven, Talisman, Philocles, and three seedlings. The second prize was obtained by Mr. Trevers, of Walworth, with Dr. Gardner, Pliny, Scottish Hero, Constantia, Belzoni, Seedling, Dolland, Luton, Rob Roy, Milo, Marshal Soult, and Industry. The third prize was taken by Mr. Harms, Farringdon Street. Messrs. Tyso were the only exhibitors in the nurserymen's class ; their collection of 24 contained Princess Royal, Wilson's Self, Niobe, Adolphus, Nestor, Belle Agreeable, Mirabile, Sabina, Flavissimus, Nonsuch, Marquis of Hertford, Oressus, Philocles, Kilgour's Queen Victoria, Gippins, Delectus, Glenelg, Cathcart, Alexis, Attractor, Flaminius, Vendome, and Heidas.

Two collections of Pelargoniums were produced ; the one from Mr. Foster, gardener to R. Staines, Esq., was in excellent condition ; it contained Superbum, Sunrise, Erectum, Duke of Cornwall, Enchantress, Staines's Duke of Wellington, Achilles, and Hebe. The second was from Mr. Pamplin, nurseryman, whose plants were Lord Byron, Superb, Achilles, Assassin, Maria, Prince of Wales, Sir T. Newton, Sir W. Scott, Alice Gray, Lord Nelson, Aurora, and Maid of Saragosa.

The extra prize offered by W. Davis, Esq., for the best collection of Fuchsias, was awarded to Mr. Robinson, Pimlico, for good plants of Prima Donna, Eppsi, Louryi, Goldfinch, Gem, Magnet, Exoniensis, Pawley's Queen Victoria, Formosa elegans, Coronet, Modesta, and Chauverii ; and a second prize was given to Mr. Ottey for twelve other nice plants.

The Miscellaneous Plants were decidedly inferior on the whole, though a few good specimens were present. This we

believe to be mainly attributable to the withdrawal of the prizes hitherto offered for collections of 12, to the exclusion of several amateurs' collections who used to contribute many good plants. The gold medal was awarded to Mr. Young, gardener to C. Barrow, Esq., for a collection of 18 ; among them were fair specimens of *Leschenaultia formosa*, *Siphocampylos betulæfolius*, *Sollya linearis*, *Erica ventricosa*, *tricolor*, and some others. Mr. Hamp received the second prize for a similar collection, containing, among others, *Achimenes longiflora*, *A. grandiflora*, *Gloxinia digitaliflora*, *Cactus Jenkinsonii*, *Erica Shannonii*, &c. In the nurserymen's class Mr. Pamplin obtained the first prize with a collection in which were a great many heaths, a good *Pimelea decussata*, and a neat plant of the lovely *Prostanthera violacea* ; the second and third prizes in this class were taken by Mr. Jennings and Mr. Bushel. The large *Victoria* medal was awarded to Mr. Bruce for four splendid plants of *Aphelexis humilis*, *Erica ventricosa superba*, *Adenandra fragrans*, and *Boronia serrulata*. Among single specimens, Mr. Bruce had another very fine *Aphelexis humilis* covered with bloom, and a good *Ixora coccinea*, and Mr. Pamplin produced a good *Erica intermedia*. Mr. Plant sent six *Orchidaceous* plants ; they were *Saccolabium guttatum*, *Aerides odoratum*, *Lycaste macrophylla*, *Calanthe veratrifolia*, *Oncidium pumilum*, and *Phaius grandifolius*.

#### ROYAL BOTANIC SOCIETY.

THIS Society's third and last exhibition for the season was held in their gardens, Inner Circle, Regent's Park, on Wednesday, July 2. Her Majesty and suite and the King of the Belgians visited the tents in the morning. The exhibition throughout presented its usual degree of novelty and extraordinary instances of superior cultivation. One remarkable incident connected with it is that of Messrs. Lucombe and Co., of Exeter, bringing Pelargoniums 200 miles, and winning prizes with them. Large collections of 30 stove and greenhouse plants were contributed by Mr. Barnes, gardener to G. W. Norman, Esq., and Mr. Ayres, gardener to J. Cook, Esq. Mr. Barnes's group contained many examples of first-rate cultivation. In Mr. Ayres's collection were *Begonia coccinea*, *Achimenes multiflora*, a small *Ixora crocata*, producing six large heads of bloom, and a pretty

plant of *Kalosanthes coccinea*, together with a healthy, well-grown *Torenia scabra*. A collection of 15 stove and greenhouse plants were produced by Mr. Frazer, of Lea Bridge Road, and another by Mr. Pawley, of Bromley. The first prize was awarded to the former, which contained many well-managed plants, among which may be mentioned *Kalosanthes grandiflora miniata*, measuring about  $2\frac{1}{2}$  feet in height, and nearly the same in width, and covered with fine healthy foliage down to the pot; a fine *Vinca alba*, about 3 feet in height, and the same in width, profusely covered with blossoms. This group contained good plants of *Manettia cordata*, *Stephanotis floribunda*, *Sollya linearis*. Several collections of 10 stove and greenhouse plants were present, the best communicated by Mr. Hunt; another by Mr. May, who won the second prize. In Mr. Hunt's collection were a fine *Clerodendron squamatum*, *Erica tricolor elegans*, a fine *Ixora coccinea*, *Boronia serrulata*, well managed, and a fine *Erica tricolor*.

Of Cape Heaths there was a good display. The first prize for 15 was awarded to Mr. May, for well-grown plants of *Savileana*, *radiata*, *densa*, and several others showing equally good cultivation. Mr. Barnes and Mr. Green also showed in this class.

Among nurserymen, the first prize was awarded to Messrs. Fairbairn, for 12 plants, who contributed a variety of *Jasmini-flora*, the curious-looking rather than beautiful *viridiflora*, and several others. Mr. Frazer and Mr. Dawson also showed in this class.

There were three groups of eight Heaths; the first, from Mr. Hunt, contained a fine *metukeflora*, *odora rosea*, in fine condition, and *Massoni*, in fine perfection. Mr. Bruce and Mr. Taylor also exhibited in this class, and six specimens were sent by Mr. Roser, gardener to J. T. Helling, Esq.

Of Seedlings, Mr. Pamplin was awarded second prizes for three varieties of *ventricosa*; they were named *magnifica*, *rosy pink*, *v. grandiflora*, larger, but not of such bright colours as the former, and *v. splendens*, producing slender flowers of a bright rose.

Of Orchids, a magnificent group was present from the garden of S. Rucker, Esq., jun.; there were *Stanhopea tigrina*, *Saccobium guttatum*, in fine condition, *Aerides odoratum*, *Oncidium leucohilum*, *Odontoglossum grande*, *Brassia Wrayæ* and *Larceana*, *Cycnoches chlorochilon*, with singular pale green flowers, *Lycaste cruenta*, very pretty, and the rare *Mormodes luxatum*.

A group of 12 small plants was contributed by Mr. Don, gardener to F. Cox, Esq., among which were *Cirrhæa viridipurplea*, very curious, *Anguloa* sp. unnamed, *Cattleya Harrisonæ*, *Schomburgkia tibicinis*, and *Aerides odoratum*. Two small collections were exhibited, one by Messrs. Henderson, and the other by Mr. Plant.

Of single specimens, there was a considerable number; we remarked a noble *Erica Massoni*, from Mr. Hunt, for which a first prize was awarded, a good *E. obbata*, from Mr. Pamplin, a fine *Veronica speciosa*, from Mr. Kinghorn, *Mahernia incisa*, 6 feet in height, from Mr. Bailey, and *Clerodendron fallax*, from Mr. Ayres. Of new plants not in bloom, Mr. Mylam, gardener to S. Rucker, Esq., jun., sent a magnificent plant of *Nepenthes ampullacea*, about 7 feet in height, and bearing numbers of large pitchers, which are beautifully streaked with brown; this was by far the most remarkable plant shown. Messrs. Henderson contributed *Jacaranda Clauseniana*. The display of Roses, both cut and in pots, was extremely beautiful; the first prize for 20 varieties of the latter was awarded to Messrs. Lane and Son, in whose collection were *Le Pactole*, *General Allard*, *Charles Duval*, *Persian Yellow*, *Flora MacIvor*, *Barbet*, and *Duchess of Sutherland*. Mr. Dobson, gardener to Mr. Beck, won the second prize in this class. A second prize was awarded to Mr. Dobson for 10; among these were *White Bath Moss*, *French Crimson Moss*, *Felicite*, and *Bourbon Queen*. Collections of cut Roses were numerous. For groups of 100 varieties, the first prize was awarded to Mr. Lane, and the second to Mr. Francis. For 50 sorts, Mr. Collison won the first prize, and Mr. Milne the second. For 25 varieties the competition was with Messrs. Paul, Lane, and Rivers, the prizes being awarded in the order in which the names are mentioned.

Among miscellaneous objects, Mr. Pamplin was awarded a prize for a collection of Gesneraceous plants containing *Gloxinia Cartonii*, *Sinningia guttata*, and several species of *Achimenes*. There were also groups of Ferns, Alpine plants, some dwarf Cacti, and several devices illustrative of the grouping of plants in flower-gardens. The numerous collections of *Pelargoniums* were generally well-bloomed, and in fine healthy condition. The first prize was awarded to Mr. J. Dobson, gardener to Mr. E. Beck, for *Favourite*, *Belinda*, *Bellona*, *Rosy Circle*, *Margaret*, *Isabella*, *Marc Antony*, *Desdemona*, *Sultana*, *Zenobia*,

Sunset, and Lord J. Russell. Second prize was awarded to Mr. Cock. The same class among nurserymen was won by Mr. Gaines, Messrs. Lucombe and Pince, and Mr. Henderson. The first prize Mr. Gaines received, for Camilla, Lady Hale, Witch, Hebe, Prince of Wales, Lady Caroline Douglas, Alpha grandiflora, Rising Sun, Aitamana, Trafalgar, Arabian, and Espaniensis. For 12 varieties in the amateurs' class, a first-class prize was awarded to Mr. Staines, Lissom Grove, for Superba, Madeline, Hebe, Duke of Cornwall, Rowena, Enchantress, ~~Alpha~~, line, Hebe, Duke of Cornwall, Rowena, Enchantress, ~~Alpha~~, Cedric, Achilles, Fair Maid of Leyton, Grand Turk, and Duke Cedric, Thurtell's Fairy Queen, Stella, Lemon, and Black Prince, Thurtell's Stromboi, Enchantress, and Cleopatra. For Fuchsias the first prize was awarded to Mr. Robinson, gardener to J. Simson, Esq., for Prima Donna, Vesta, Eppsi, Robinsonii, Gem, Lowry, Chandletti, Magnet, Formosa elegans, Exoniensis, Coronet, Barnes's Hope, and a second prize was also awarded to Mr. Gaines.

A collection of Calceolarias, compactly grown, from Mr. Gaines was awarded a first prize; the sorts were Prince Alfred, Tigrina, Kinghornii, Flash, Lady Ann, Charteris, and Ada. The first prize for Verbenas was awarded to Mr. Smith, of Hornsey, for Lilac perfection, Vesta, Queen of England, Smith's Superba, Duchess of Sutherland, Beauty, Excelsa, Delicata, Beauty Supreme, Atropurpurea, and Defiance. Second prize to Mr. Turner, of Chevely.

There was an excellent display of Pinks, both in quantity and quality. The first prize was awarded to Mr. Turner, for the following 24 blooms: Weedon's Victoria, Omega, Eclipse, Rosanah, Tower, Warden, Napoleon, Turner's Masterpiece, Majestic, Alpha, Model, Enchantress, Miss Blackstone, Prince of Wales, Little Wonder, Wilmer's Victoria, Defiance, Duchess of Kent, Melone, Jilf's Mary Ann, Hardstone's Prince Albert, Turner's Beauty, President, and Gem. Second prize, Mr. Norman. Heartseases were exhibited; prizes were awarded first to Mr. Turner, second, Mr. W. C. Brown, third, Mr. Hart. The seedlings were numerous. In Pelargoniums a first prize was awarded to Mr. Whomes, gardener to C. Foster, Esq., of Clewer, for a variety named Paragon, rosy crimson under petals, with a narrow margin of the same colour around the top petals,

which are of a deep maroon, the Prairie Bird, from Mr. Beck, a flower of good form and substance, somewhat resembling the Queen of the Fairies, but expanding well. In Calceolarias, first prize to Mr. Standish; his best seedlings were Matchless, Trumpeter, and Nico. Second prize to Mr. Gaines.

Seedling Verbenas, from Mr. Smith, of Hornsey, a certificate to one named the Duchess of Sutherland, a delicate pink flower with a small rose-coloured spot, a very pretty variety. Several good seedling Pinks were shown; those selected for rewards were Ward's Great Britain, a red, with rose leaf, good lacing, a large flower well filled in the crown, and Turner's Master-piece, a delicate rose, lacing regular and unbroken, flower large and full. 12 specimens of Henderson's Queen Victoria, a light fancy Pelargonium, had a very pleasing effect, as also another of great beauty, resembling a rose-coloured Sweet-william, the name of which we did not obtain. Among the seedling Petunias, there was a good white named Alba Magna.

#### TO CORRESPONDENTS.

**HORTUS AMATUS.** — Add to your collection of stove plants the following, which may be considered first-rate: — *Clerodendron Kämpferi*, *C. infortunatum*, *C. squamatum*, *Ixora rosea* and *crocata*, and *Rondeletia speciosa*.

**ENQUIRER.** — Loam is the staple earth for growing Cacti; rotten manure and leaf-mould should be added in proportions of about one half the quantity of loam used; plenty of fine sharp sand, and pieces of broken pots, are also essential.

**T. S.** — From what we can learn, glass is not likely to be cheaper, until an importation from the Continent brings down our manufacturers' prices.

**TYBO.** — Nothing can be easier than the management of exotic ferns: they require the usual temperature of a plant stove, plenty of water, and shade, during the summer, and to be repotted about once a year.

A box of Calceolaria blooms, from a correspondent at Ipswich, by some accident did not reach us till too late for last Number, and so withered that it was impossible to form an opinion of them. If not too late, we should like to see them again.

**X. T.** — There is a peculiar orange tint about the seedling Petunia No. 5. that renders it very desirable. Do your best to increase the stock of it: the others are too nearly like varieties already out.

**SUBSCRIBER.** — We expect, in the course of a couple of seasons, to find Calceolarias exhibited with stripes as clearly defined as those of the Carnation. Mr. Plant, of Cheadle, already advertises something of the kind; and we are aware of a few others in a collection at Southampton. The florist moves by strides now-a-days.

**A SUB. FROM NO. 1.** — There is a sameness about your Antirrhinums that spoils their beauty; they approach too nearly quadricolor and its thousand varieties.

## CALENDAR FOR SEPTEMBER.

THERE are comparatively few of our native flowering plants but have bloomed earlier in the season, but the time is approaching when cryptogamic forms of vegetation become numerous, and are highly deserving of observation. Of the many hundreds of these plants found in the British Isles, a very few are applied to use as articles of food, a few sea-weeds and mushrooms being, I believe, all so used in this country. Among Fungi, about four species of Agarics — the common or true mushroom, the horse-mushroom, and two sorts of champignons, — with the morel and truffle, are nearly all that are used in cookery among us. Occasionally a few other mushrooms may be collected and sold in the markets for making catsup, but this is more the result of accident than otherwise. Still it is important that no other mushrooms should be used either in a recent state or for boiling down, than those indicated above, as accidents occur almost every year, either from using poisonous species, or from inattention in cooking. This last operation should be particularly attended to, the mushrooms whether stewed or broiled being thoroughly done, and plenty of salt used with them. Heat almost entirely dissipates the poisonous properties of Fungi, and renders them less hurtful, although even then they are not esteemed very digestible. The use of mushrooms is general among all classes in the country during their natural season ; the morel and truffle are seldom seen but at the tables of the affluent. The collection of the last does not appear to be carried to that extent in this country to which it might be ; at any rate they appear tolerably plentiful in most situations in the south of England on the chalk, and no doubt, on other soils as well. Its underground habitat is not very favourable to the observation of its method of growth and propagation, but it is to be hoped we shall not remain long without sufficient knowledge to attempt its artificial culture with more success than has hitherto rewarded the few who have been sufficiently enterprising to try.

In the flower-garden little remains to be done but to keep it neat and clean, removing all plants as they fade, and leaving the beds in the neatest possible state for the winter, whether by filling them with evergreens, preparing them for spring bulbs,

or whatever may be the course intended to be pursued in the ensuing spring. Geraniums, verbenas, and various other plants continue to look so gay while the weather is open, that it is to be hoped we shall soon see movable glass structures used to prolong their season to the utmost limits a fine September and October will admit in our climate. Propagation and potting up plants from the borders must be attended to until a sufficient stock is obtained or all room occupied. For an early display in the flower-garden in the spring, a good selection of annuals should be sown, or seedling plants selected from the borders and potted. These placed on a dry bottom in temporary frames or pits will pass the winter well, and materially assist the spring bulbs; also a few grown with a little extra care are very useful for the conservatory early in the season.

The greenhouse must now be prepared for the reception of the plants for the winter. All the air possible, and a careful and limited supply of water, should be rigidly attended to, so as to assist the plants as much as possible in ripening their wood.

Woody stove plants will probably require a little assistance from fire-heat for the same purpose, but it must be carefully applied, as well as water, as any excess in either will be highly detrimental. Even in the damp stove a diminution of moisture must now take place, and some rest gradually given to the vital energies of the various plants.

D. M.

**FLORIST'S FLOWERS.**—It is in this month the Dahlia-grower reaps his reward: the blooms are now “coming good”; still attention must not lag; additional sticks, fresh ties, the old ones loosened, ear-wigs, thinning, shading, &c. are among the matters that require unremitting care; by the end of the month pot roots may be gradually dried preparatory to the winter. Cuttings of Pinks and Pansies that are well rooted should be planted out where they are to remain, though a portion of the best of the latter ought to be preserved in pots. Carnation and Picotee layers also may be potted as soon as they are fit. Tulip beds should be prepared, and the bulbs arranged at convenient leisure. Perhaps no better time than the present can be had to remove the tender kinds of Roses that may require protection through the winter.

P.





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FLORIST'S JOURNAL.

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THE ROSE.

WITH AN ILLUSTRATION.

OUR engraving this month represents a very beautiful seedling of the Bourbon class of Roses, obtained by Mr. Milne, gardener to C. S. Chauncey, Esq., of Dane End, Little Munden, Hertfordshire. The plant, we understand, is of vigorous habit and constitutionally robust : of its flowers it is unnecessary to speak ; our figure will convey the best idea of their large size, unexceptionable form, and beautiful colour. It is called the "Beauty of Munden," and is, we think, destined to perpetuate the remembrance of Rose growing at that place. The blooms from which the accompanying portrait was taken were exhibited at the July meeting of the Royal Botanic Society, where they received the principal prize offered for similar production. —ED.

ROSES IN POTS.

ABOUT the present time last year I began the culture of Pot Roses, and certainly, for the little expense and less trouble incurred by them, nothing could yield a more satisfactory return ; in fact, so well pleased am I with the result, that an order has already issued for doubling the number ; this being the case, it

has occurred to me, that it can be only necessary to make their capabilities known to ensure for them very general estimation and adoption.

The plants selected for me were healthy three years old specimens, which had made from five to eight vigorous shoots in the preceding summer: they were lifted from the open ground, care being taken to preserve as many of the young fibrous roots as possible: most of them were growing on their own bottoms, as the nurserymen express it, that is, were not produced from buds inserted on another stock; and these I greatly prefer, because of the liability of the plants to protrude suckers from the base of the stems, a feature common to the whole family. These, from their more immediate vicinity to the roots, are sure to obtain the largest supply of nutriment; and this, when withdrawn from the system of the plant by an alien shoot, which has afterwards to be removed, is a direct robbery of the legitimate branches: if, however, the sucker is of the same kind as the head, it, of course, can be regulated so as to contribute towards the general improvement of the plant, and is then rather an advantage than a loss.

The soil used for potting was chiefly rich turfy loam, enriched with rotten manure from an old melon bed, and the mass made porous with a considerable quantity of road grit — the proportions were about three of loam, two of manure, and one of sand; the pots were rather larger than what would have been necessary to contain the roots without cramping, and after the potting was performed, the strongest of the shoots was shortened back five or six joints, and the plants plunged for the winter to the rims of the pots in coal ashes, with only an occasional protection from the severe frosts of spring by means of mats thrown over them. This was fully sufficient for the kinds chosen, as they were chiefly Perpetuals and their hybrids, with a few Gallicas: of course, for the tender varieties of the China and Bourbon tribes, a pit or frame would be quite indispensable.

The pruning was done between the beginning and middle of March, a short time before the buds begin to burst into leaf, when the number and strength of the flower-bearing shoots for the ensuing season can be ascertained with the greatest exactitude. From the time the flower buds make their appearance until their expansion, is the only time that Roses, in pots, can be said to require attention; but then it *must* be given them;

water is required nearly every day, varied about twice a week with liquid manure ; and it is equally necessary that they be gone over at the same time and examined carefully, in order to prevent the ravages of the grubs, which secret themselves in the young leaves and buds, and, if not removed speedily, destroy the whole crop of flowers ; nor is there any effective remedy for this besides picking them off by hand, which must be continued, without omission, while there is a bud upon the plants.

The beauty of the blooming period will be greatly heightened and prolonged if the entire collection can be removed to a greenhouse, or some similar protecting medium, and as it occurs at the most pleasant part of the year, the regular inhabitants of these structures may be taken out to afford room for their summer rivals. It will be decidedly advantageous both to the health of the plants and their general appearance, if they can be accommodated with this station, a fortnight or three weeks before they bloom, as the leaves are then protected from injury occasioned by fluctuations of the weather, and an additional vigour imparted to the blooms, while an air of high cultivation will pervade the whole. It is then, indeed, that Roses are seen in perfection: to attempt a description of them in this state would be idle, they must be seen for their beauty to be duly and properly appreciated.

Immediately after the flowering was over, my plants were removed from the greenhouse to a sheltered situation by the side of a north wall, and being regularly supplied with water, have made most luxuriant growth, sufficiently so to make a fine display next year nearly a matter of certainty ; they will remain where they are now placed until the return of frosty weather, when the plunging must be repeated, and the same routine of management renewed. By allowing them to bloom at the natural season, and removing them directly it is over, they do not interfere with the culture of any other class except Geraniums, for my Cinerarias and Calceolarias were done before the Roses required their space, and immediately after them the house was filled with Carnations, followed by Fuchsias, &c. ; thus the erection has been a continued mass of bloom, with also a continued change, and much admiration has been expressed on viewing the several collections, but more especially with reference to the Roses.

F. ST. AULIER.

[The latter part of our correspondent's excellent communication deserves particular notice. He appears to have adopted the only true course to continue the proper interest in his greenhouse. These erections should always contain something to awaken attention and claim the admiration of visitors, but more especially through the summer months; and with the addition of a small pit or two, and a judiciously selected stock of plants, like those mentioned in the foregoing paper, it may be ensured. The reason that it is not more generally the case than at present may be traced to the latter consideration: an heterogeneous collection is made, without regard to anything further than filling the house; and from the circumstance of the plants brought together being natives of various latitudes, and therefore producing their flowers at so many various seasons, the rich display so much to be desired is entirely lost. We think that a selection of four or five genera, made with a view to this consecutive developement, would afford a much greater amount of satisfaction than a miscellaneous collection can, with even superior management. The subject appears so well deserving consideration that we shall speedily return to it.—ED.]

### IMPROVEMENT OF WILD FLOWERS.

HAVING derived much pleasure and some profitable hints from the perusal of the excellent papers on this subject, which have appeared in the "Florist's Journal," I beg to contribute my quota towards so desirable a consummation, as the improvement of our native Flora.

There are indeed very many of the denizens of our "woods and wilds" that at present receive but an occasional and cursory notice from the botanist, who, in his exploratory rambles, chances to stumble on a new habitat, and are again forgotten, save by the few who cherish a love of nature's wildlings. These, if we could induce the pains-taking horticulturist to receive and foster them as he so assiduously does the products of a foreign clime, would, in my unhesitating opinion, shortly become equally as ornamental, with the great advantage of being constitutionally suited to our climate, and therefore of easy

management. It would be no difficult matter to swell this paper by describing the superior and ready means of embellishment, this would place in the reach of every one, without regard to professional acquirements, affording even the suburban tyro a chance of ornamenting his garden-plot with subjects possessing no mean amount of interest.

The greater facility offered in the culture of a native over an exotic plant is however so apparent, as to need no enforcing. The following are a few which cannot fail to requite whatever attention they may meet, for even in their present state they are beautiful.

*Campanula rotundifolia*, Hare Bell.'

*Silene acaulis*, Stemless Catchfly.

— *conica*, Corn-field ditto.

— *anglica*, English ditto.

— *Armeria*, Lobels ditto.

*Agrostemma coronaria*, Rose Campion.

— *Flos-cuculi*, Ragged Robbin.

*Saponaria officinalis*, Soap Wort.

*Erica cinerea*, Fine-leaved Heath.

— *Tetralix*, Cross-leaved ditto, and their varieties.

*Ononis arvensis*, Rest Harrow.

*Hieracium*, any of the species, Hawkweed.

SYLVA.

## THE GROWTH OF HEATHS IN THE OPEN BORDER.

PREVIOUS to last spring I had heard of growing *Ericas* in a surprising manner by means of planting them in a bed in the open air, and in fact had seen something of the sort at one or two of the principal metropolitan nurseries, and therefore being very partial to the tribe I felt disposed to attempt the method, or at least to give it a trial; accordingly twenty-four plants were selected for the purpose, and I now send you the result.

It will be better perhaps to describe the bed, that others who may be induced to try the same means may know how to

begin. A space, 18 feet long and 8 feet broad, was excavated to the depth of 1 foot in a perfectly open situation, unsheltered in any direction ; the bottom of this hole was covered over with about 3 or 4 inches of broken pots, stones, and other material suitable for forming a drainage to the bed ; in addition to this, another and deeper hole was sunk on the outside, and filled in like manner, being intended to act as a receiver of the superfluous water from the bed, the latter was filled about 3 inches above the surrounding surface with fibrous peat chopped together and mixed with a large quantity of broken stones, charcoal, bones, silver sand, and all the pieces of sticks, roots, &c. contained in it, and being pressed moderately firm, the plants were placed in it at once. This was the latter end of April, and the weather being very fine then, no apprehensions of frost were entertained. The kinds selected were 3 plants of *Depressa*, 5 of *Tricolor* in varieties, 9 of *Ventricosa* and varieties, 1 *Hartnelli*, 1 *Aristata*, 1 *Beaumontia*, 1 *Irbyana*, 1 *Hybrida*, 1 *Wilmoreana*, and 1 *Jasminiflora alba*. These were all small plants in sixty-sized pots ; they were in a healthy growing condition all of them, except the *Beaumontia* and two of the *Ventricosas* ; and odd enough they looked when first placed out, for you see I had allowed each plant a space of 2 square feet, and at that time they did not occupy much more than so many inches, and many were the jokes I was obliged to laugh at in consequence. However, the case is altered, for on the whole they now stand as thick or nearly so as you would recommend to place plants of their size that were growing in pots. With the exception of the *Beaumontia* which died outright, and one of the *Ventricosas* that was sickly when planted, all of them have made truly astonishing progress, and that too without any other attention than an occasional watering when first planted, and the necessary tieing into shape ; for being determined to test the method as fully as possible, they were allowed to stand without covering of any kind ; in fact, some apprehension was excited by the continued wet weather of the past summer, but the soil in which they stood being very pervious, and the hole on the outside drawing the water from the bottom of the bed, they stood unharmed, and never appeared to have more than they could properly appropriate. It was on account of the presence of so much moisture that I deemed it essentially necessary that it should remain uncovered even in the brightest sun-light, for

knowing the plants would absorb a great quantity, I also knew they must be allowed the means to elaborate what they had thus secreted, and thus far have succeeded as well as could be wished. They are perfectly clean, not a symptom of mildew about them, and, what is my only trouble, are growing yet. Would you advise me to begin to cover them now in order to prevent any more rain falling on the bed, and thus induce them to ripen wood ; and what sort of covering would you recommend, for I fully intend them to remain where they now stand through the approaching winter ; and if they can be preserved till this time next year, there can be no doubt but that they will have filled the entire space allotted them.

#### HORTULANUS.

all means keep them as airy as possible, never covering them unless in the case of a heavy storm. The cold weather approaching will effectually stop their growth, and it is only necessary to insure them the means of ripening the new wood to enable them to pass through the winter, a contingency that does not rest entirely with any of us, as it depends chiefly on the amount of sun-light they may receive. With respect to the protection for the winter, we should recommend a wooden erection something like a low span-roofed pit, with lights hung to the ridge, the walls or sides to be hollow, formed by driving stout posts into the ground at the angles and wherever necessary, and covered on the outside by weather-boarding, and the inside to be lined with plain half-inch boards, the space between to be filled with saw-dust, this, with a sufficiency of mats or other covering to the glass, will, we think, protect them safely.

—ED.

#### ARRANGEMENT OF ALPINES UPON ROCK-WORK.

*From Lothian's Culture of Alpines.*

IN placing out the plants, the proper disposal of them is essentially requisite for appearance, as well as to insure success in their culture. Therefore, the north side is to be taken up principally with cryptogamic plants, requiring the shade, and several strictly Alpine plants. To assist as much as possible, some trees planted

on this side are further required. A more suitable tree cannot, perhaps, be introduced into such a place than the common thorn and its ornamental varieties, which is described by the Scottish bard as "The milk-white thorn that scents the evening gale." The larger ferns can be disposed among the crevices and at the foot, where the soil consists of peat, leaf-mould, and sandy loam; while the lesser ones and mosses can be planted as follows:—

The stones already mentioned :s being excavated or worn by the waves, to be filled when for ferns with peat, leaf-mould, and a little white sand, and then planted with such as the *Ar'iantum*, or maiden-hair family, *Polypodium vulgare*, *Asplenium Trichomanes*, *A. viride*, &c.; also *Scolopendrium*, *Cystopteris*, *Cryptogramma*, and *Hymenophyllum*, besides *Grammitis Ceter-rach*, a pretty little rare fern.

Again, for mosses, let as much of the soil in which the plants are growing naturally, be taken up with each plant (or tuft) as will fill the stone or hollow, observing to leave it below the lip, in order that the rain may lodge therein to supply the plants with sufficient moisture; and those growing upon sticks or stones can be placed in the cavities with the pieces along with them. A collection of mosses thus formed would even of themselves prove very interesting about a place. Many of the Lichens will also succeed by this treatment, which are highly interesting and beautiful, such as *Scyphophorus cocciferus*, *Le-canora tartarea*, &c.

On the top and sides of the rockery, *Thymus*, *Iberis*, *Parietaria*, *Linaria*, *Phlox* (dwarf), *Saxifraga*, *Veronica*, *Polygala*, *Cochlearia*, *Draba*, and many others of a similar nature may be placed. Succulent plants also, such as *Sempervivum*, *Sedum*, *Mesembryanthemum*, &c., will thrive most luxuriantly on stones, as recommended for mosses, the spaces being filled with sandy loam and a little peat. Here and there, throughout the rockery, may also be planted the common heather and other hardy heaths, which have a very imposing effect during the summer and autumn months. In the border, along the base of the rock-work, may be planted heaths, *Vaccinium*, *Azalea procumbens*, and other dwarf shrubs; *Rubus Chamæmorus*, *R. arcticus*, and others of the genus must be raised a little higher. They may be planted in good-sized boxes, sunk in the rockery among the stones, the soil for them being composed of bog-mould and

white sand. Maritime plants can be planted appropriately at intervals round the pond at the base of the rock-work.

In a corner of the pond, some of the larger grasses, &c. may be planted, such as *Typha latifolia*, *T. angustifolia*, and *T. minor*, and many others, particularly *Alisma plantago*, which appears to great advantage.

In the pond, *Nymphaea lutea* and *alba*, *Ranunculus aquatilis*, and other aquatics, may be stationed; but in planting these they should first be placed in large pots, which should be cracked, so that when the roots begin to extend themselves into the soil at the bottom, the pots may fall away: they may be tied round the mouth with small twine, which will keep the pots together until the plants are settled and beginning to strike out roots; by that time the twine is rotten, and consequently will give way.

## GLOSSARY OF TERMS USED IN BOTANICAL DESCRIPTIONS.

(Continued from p. 194.)

**CAPILLARY—CAFILLACEOUS.** Slender, resembling a hair.

**CAPILLATE.** Composed of, or covered with, fine hairs.

**CAPITATE.** Headed, applied to a single organ, as the stigma, when the apex is round and blunt like the head of a pin, and to the entire inflorescence when it is produced in small dense heads.

**CAPITULAR.** Growing in small heads.

**CAPREOLATE.** Producing tendrils like the vine.

**CAPSULE.** A seed-vessel, to which the seed does not in any way adhere, as in the auricula, pink, &c.

**CAPSULAR.** Having a large or otherwise remarkable capsule.

**CARCERULA.** An indehiscent seed-vessel, having several cells arranged round a common centre, as in *Malva*.

**CARINA.** A keel, usually applied to the two lower petals of a papilionaceous flower.

**CARINATE—CARINATUS.** Formed like the keel of a boat.

**CARIOUS.** Decayed.

**CARNEUS.** Pale pink, flesh-colour.

**CARNOSUS.** Of a firm, fleshy substance.

**CARPELS—CARPELLA.** The several portions into which a compound fruit may be divided.

**CARPOLOGY.** The scientific explanation of the structure of fruits and seeds.

**CARTILAGINOUS.** Gristly, of a tough, hard substance.

**CASSIDEOUS.** Helmet-shaped.

**CATAPETALOUS.** When the petals of a flower are joined to the base of the stamens.

**CATULUS.** A catkin, synonyme for Amentum.

**CAUDATE.** Having a long projecting extremity like a tail.

**CAUDEX.** The trunk or principal stem.

**CAUDICULA.** Small membranous appendages, to which the pollen masses of some Orchideæ are fixed.

**CAULESCENT.** Acquiring a distinct stem.

**CAULICULI.** Stems rising directly from the neck.

**CAULINE.** Growing upon or belonging to the stem.

**CAULIS.** A stem composed of cellular tissue alone, or, in other words, is "soft-wooded," in contra-distinction to the caudex, or "hard-wooded," trunk.

**CELLULA—CELLA.** Each of the vesicles composing cellular tissue.

**CELLULAR TISSUE.** The substance of which a great portion of all vegetable matter is composed; it is formed by the collection of minute, irregular-shaped vesicles, containing fluid.

**CENTRIFUGAL.** This term is applied when the flowers of a peduncle expand at the centre first, and in succession towards the outside.

**CENTRIPETAL.** The opposite of the above.

**CEPACEOUS.** Partaking of the properties of an onion.

**CERACEOUS—CEREUS.** Of the substance or nature of wax.

**CERATIUM.** A long bivalved, one-celled seed-vessel.

**CEREALIS.** Belonging to the group of corn-bearing plants.

**CERINUS.** Of the colour of wax.

**CERNUOUS.** Nodding, drooping.

**CERVINUS.** Fawn-colour, tawny.

**CHANNELLED.** Furrowed, plants are channel-leaved when the margins of the foliage are folded together so as to form a conduit.

**CHARTACEOUS.** Thin, flexible, nearly transparent, resembling paper.

**CHARRED.** Blackened as by fire.

**CHLORANTHIA.** A disturbed condition of the floral organs, when they assume the colour or form of leaves.

**CHLOROPHYLLA.** The green colouring matter of plants.

**CHLOROSIS.** A diseased state of the foliage, in consequence of which it loses its natural green colour.

**CHROMULA.** The colouring matter of flowers.

**CICATRICULE** — **CICATRIX.** A small scar left by the fallen petiole.

**CILIÆ.** Small, fringe-like hairs, resembling those of the eye-lash.

**CILIARIS** — **CILIATED.** Fringed with fine hairs.

**CINEREOUS.** Grey, formed by an equal mixture of black and white. *Cineraceous*, paler, and *Cinerascens*, very pale grey.

**CINGULUM.** That portion of a plant immediately between the stem and the roots, the neck.

**CINNABARINUS.** Vermilion, scarlet tinted with yellow.

**CINNAMOMEUS.** Light brown, the colour of cinnamon.

**CIRCINATE.** Curved closely inwards like a crosier.

## LIST OF NEW PLANTS.

### CINCHONACEÆ. — *Pentandria Monogynia*.

*Gardenia Stanleyana.* This noble stove plant is a native of Sierra Leone, whence it was lately introduced by Mr. Whitfield. It is remarkable for its immense trumpet-shaped flowers, measuring 8 or 9 inches long, and nearly 5 inches broad; they are marked in the throat with blotches of a lurid red, interspersed with green, which extend all over the base of the limb, and are relieved and heightened by a broad margin of pure snow-white.

Mr. Glendinning in a note says, "The flowers are sent up in great profusion from the base of the numerous shoots, which, under good management, are always abundant and healthy. What will render the plant a great favourite in our stoves is its easy cultivation. I would recommend rough peat, leaf-mould, and silver sand, in nearly equal proportions. Let the pots be well drained, and place a little moss over the drainage before potting, to prevent the compost from mixing with the drainage. Place the plant in a rather high temperature in a close house or pit, and give abundance of atmospheric moisture. Under these circumstances, the cultivation and flowering of this choice exotic will be certain and complete." It was named by Sir William Hooker after the Earl of Derby, in whose service Mr. Whitfield was engaged when he discovered the plant. — *Bot. Reg.* 47—45.

MYRSINACEÆ. — *Pentandria Monogynia*.

*Labisia pothoina*. A singular plant from Penang, presented to the Horticultural Society by T. Lewis, Esq. In the early stages of its progress it was taken, by its general appearance, for a Pothos, or some such plant. However, on the production of flowers, it was found to belong to the family of Ardisias. The flowers individually are small, but being borne on a thickly-covered spike, are rather pretty; they are white, or pale rose colour. The plant requires the ordinary treatment of stove plants. — *Bot. Reg.* 48—45.

LAMIACEÆ. — *Didynamia Gymnospermia*.

*Eremostachys laciiniata*. A strong-growing, hardy perennial, with large spindle-shaped roots, and a stem from 4 to 6 feet high. The Salvia-like flowers are yellow and bright orange. It is a native of dry hills on the eastern side of Caucasus, and in cultivation requires to be kept as free from superfluous moisture as possible, to assist in which the large fleshy roots should be placed only half way in the earth, and the protection of a cold frame for the same reason is found necessary in winter. — *Bot. Reg.* 52—45.

LEGUMINOSÆ. — *Decandria Monogynia*.

*Gompholobium versicolor var. caulinis purpureis*. A very handsome variety, with purple stems, and large orange-red flowers. It is a suffruticose plant, raised by Messrs. Lucombe, Pince, and Co., from seeds sent home by Mr. James Drummond from the Swan River; the flowers are peculiarly beautiful just before expansion; when the rich and deep scarlet of the standard alone is seen, they become paler in age. — *Bot. Mag.* 4179.

[It will be quite necessary, before Messrs. Lucombe, Pince, and Co. send this plant into the world, to name it afresh, for the above interminable one is carrying the joke rather too far.]

HÆMODORACEÆ. — *Hexandria Monogynia*.

*Anigozanthus pulcherrimus*. One of the most beautiful of this fine genus, from its copious and richly-coloured flowers and flowering branches; the former being bright yellow, the latter clothed with scarlet hairs, curiously branched on a yellow ground. It is a native of the Swan River settlement, where it was detected by our indefatigable friend Mr. James Drummond. From seeds sent by him it has been raised by Mr. Lowe, of Clapton Nursery. It has not yet, however, as far as I am aware, bloomed in this country, and our figure is taken from a dried native specimen sent by Mr. Drummond, in which, from the nature of the plant, and of its vestiture, the form and colours are as well preserved as if seen in a living state. Perhaps in the general structure of the blossoms it comes nearest to *A. flavidus*, but the flowers are much shorter, and the panicle and leaves and clothing are all very different in the two species. It loves a light sandy soil, and the protection of a good greenhouse, and will prove a highly ornamental plant to our gardens. — *Bot. Mag.* 4180.

CYRTANDRACEÆ. — *Didynamia Angiospermia*.

*Chirita zeylanica*. The family of *Cyrtandraceæ*, like their affinities the *Gesneraceæ* (of which indeed Mr. Brown considers them a group or section), are of great beauty and easy cultivation, and they seem to abound in the East Indies as the true *Gesneraceæ* do in the tropical parts of the New World. Our present species is a native of Ceylon, and was raised from seeds sent from that island by Mr. Henderson, the scientific gardener to Lord Fitzwilliam. It is a free flowering plant, growing about a foot high; the flowers are large and handsome; the limb of the corolla is a rich dark purple, and the tube is reddish and paler. It requires the treatment of *Gesneraceous* plants. — *Bot. Mag.* 4182.

AMARYLLIDÆ.—*Hexandria Monogynia*.

*Grifflinia hyacinthina*. A lovely plant, not new, but rather scarce, closely allied to *Amaryllis*, from which it differs materially in the colour, the flowers of the present species being a bright ultra-marine blue. It was discovered in Brazil by Mr. E. Nordford, and imported to this country in 1815 by Mr. Griffin, of South Lambeth, in compliment to whom it is named. There are several varieties of the species; that figured was bloomed in the nursery of Mr. Jackson, at Kingston; the segmental divisions of the corolla are broader than is usual in the other varieties.—*Pax. Mag. Bot.*

LILIACEÆ.—*Hexandria Monogynia*.

*Ornithogalum aureum*. This species, although nearly half a century has passed away since its first introduction, is yet by no means common. Most of the specimens now existing in collections, we believe, have been imported within the last few years, along with other "Stars of Bethlehem," and a host of the Iridaceous plants which throng the terraced lands of the Cape of Good Hope.

The length and breadth of the foliage of *O. aureum* are somewhat variable, so also is the colour of the flowers, which runs through several grades of yellow; the flowers, moreover, of some specimens expand widely, whilst in others they partake more of a cup-like form. As the interior portion of the flower is the most brightly coloured, it is almost superfluous to add, that the former are by much the most handsome. The blossoms are produced in succession upon a thickly-set raceme, which ultimately attains a height of from 12 to 18 inches; and as several are developed at one time, they form a very beautiful object, which continues for a long period. It may be grown in pots for the greenhouse, or in a warm border in the open air; if the latter plan is adopted, the bulbs should be taken up in autumn, and kept in a dry situation.—*Pax. Mag. Bot.*

ERICACEÆ.—*Pentandria Monogynia*.

*Azalea Lætitia*. This beautiful and fragrant hybrid was obtained by the Hon. and Rev. W. Herbert, from seed of a common *Rhododendron ponticum*, impregnated in the greenhouse at Spofforth by pollen of *Azalea*. It produces a dense head of white flowers, the upper petals of which are feathered with orange and yellow.—*Bot. Reg. 51—15.*

ORCHIDACEÆ § ARETHUSEÆ.—*Gynandria Monandria*.

*Chloraea virescens*. A terrestrial Orchidaceous plant from the subalpine pastures of the Cordilleras of Chili, with handsome bright orange-coloured flowers, borne on a dense, erect raceme. It has been reared by Mr. Cameron, the intelligent and skilful curator of the Botanic Garden, Birmingham, who exhibited it at the last May exhibition in the garden of the Horticultural Society as the *Chloraea chrysanthia* of Pöppig, in which he is probably correct; but it is also the *C. virescens*, so called on account of the green veins which are drawn over the orange ground colour of the gaudy flowers, and the latter name being the oldest, must be retained. It requires to be grown in a warm greenhouse, with an ample supply of water during the growing season, and to be kept dry when the leaves die down for the winter.—*Bot. Reg. 49—45.*

*Cymbidium Mastersii*. We have no information concerning this plant, further than that it was received from the East Indies by Messrs. Loddiges in the year 1841, and blossomed in December, 1844. It is a very distinct species, with snow-white flowers, sweet-scented with the fragrance of almonds. Its erect flower-stalk, closely-covered with long, green, sharp-pointed, equitant, imbricated sheaths, is quite unlike that of any other species.

It was, we understand, named by the late Mr. Griffith after Mr. Masters, one of the principal assistants in the Botanic Garden, Calcutta.—*Bot. Reg. 50—45.*

## LITERARY NOTICE.

*Practical Hints on the Culture and General Management of Alpine or Rock Plants.* By JAMES LOTHIAN, Gardener to W. A. Campbell, Esq. of Ormsary. London: S. Highley. Edinburgh: W. H. Lizars.

MR. LOTHIAN's motive in preparing this volume for the press was, as he informs us in his preface, founded in a desire to be useful in assisting the inexperienced botanical cultivator to grow successfully the interesting group of plants to which his book relates. They are, he says, singularly beautiful, easy of cultivation, nor is there a class of plants more worthy the attention of ladies. Many of the Alpines may also be successfully grown in Wardian cases, and thus become beautiful ornaments to a town residence, or even the more humble abodes of the working classes.

For the construction of rock-work, whether on a magnificent or smaller scale, the directions are explicit and practical, showing the kind of materials to be used and how to use them. This part of the work is illustrated by some useful plans, including ponds for aquatic plants. At the end of the book are well arranged lists of alpines, ferns, marsh or bog plants, plants for the pond, American shrubs and mosses. There are also coloured plates of some of the more beautiful species.

A careful perusal and examination of the contents of Mr. Lothian's little volume convinces us that it is well adapted for the purpose intended by its author; we therefore cordially recommend it to the notice of our readers, and to all lovers of Alpine or Rock Plants.

## FLORAL INTELLIGENCE.

## ROYAL SOUTH LONDON FLORICULTURAL SOCIETY.

THE third exhibition of this Society took place on Wednesday, July 23. The exhibition was by far the best which we ever remember to have been seen under the auspices of the Society. We refer especially to the heaths, the miscellaneous plants, the carnations, the picotees, and the cut flowers, as being not only numerous, but in the highest state of cultivation.

There were three large collections of 18 miscellaneous plants. Mr. Ayres, of Brooklands, obtained the Gold Medal. Mr. Bruce, of Tooting, and Mr. Young, of Camberwell, also exhibited in this class, and were placed as their names occur. In Mr. Ayres' collection were two very beautiful dwarf plants of *Erica ampullacea*, quite a mass of bloom; *Angelonia salicifolia*; *Begonia coccinea*, very good; and *Gloriosa superba*. For 10 plants the large Victoria Medal was awarded to Mr. Roser, of Streatham. Mr. Hamp, of South Lambeth, gained the Large Linnæan; he had a good plant of *Ceropegia elegans*. Mr. Plant, of Stratford, obtained the Small Linnæan, and had a fine plant of *Boronia viminea*, 1 foot high by 2 feet across, and a plant of *Leianthus nigrescens*. Mr. Kaye, of Norwood, also exhibited in this class. Among specimen plants, Mr. Ayres had a good *Leschenaultia formosa*, 2 feet by 2 feet, to which the Large Linnæan was awarded; with it was a good *Erica juliana* and *Pentas carnea*. The Small Minerva was given to Mr. Cuthill for a tall *Lisianthus Russellianus*, with about forty expanded flowers.

The Heaths sent from the nursery of Messrs. Fairbairn were quite an exhibition of themselves. For 12 plants they received the Large Victoria Medal. This collection contained *E. ampullacea rubra*, about a foot high and 3 feet through; *E. ampullacea*, about the same size; and *E. Irbyana*, 2 feet by 3 feet; *E. gemmifera*, *E. eximia*, *E. oblata*, *E. jasminiflora alba*, *E. Wilsonii*, a good seedling variety, with very large flowers in the way of tricolor; *E. princeps*, *E. tricolor coronata*, *E. Satileana*, and *E. tricolor rosea*. Besides these, Messrs. Fairbairn exhibited 24 plants, to which an extra prize was given. Mr. Dawson, of Brixton, obtained the Large Linnæan for 8 plants, containing *E. Irbyana*, 4 feet high; *E. infundibuliformis*, 2 feet by 2 feet; *E. ampullacea*, 2 feet by 3 feet; and *E. Aitoniana*. Mr. Bruce obtained the Large Linnæan for 6 plants, including *E. viridifolia*, a very large plant: Mr. Roser and Mr. Doran contributed to this class. Of specimen Heaths, Mr. Dawson had a good *E. Massonii*, 2 feet by 3 feet, for which the Small Victoria was given. Messrs. Fairbairn obtained the Small Linnæan for *E. Shannoniana*, 3 feet by 3 feet. Mr. Dawson obtained the Small Minerva for *E. infundibuliformis*, 3 feet by 3 feet.

Mr. Plant, gardener to J. H. Schröder, Esq., of Stratford,

obtained the Large Victoria for Orchidaceous plants. This collection contained *Lycaste tetragona*, *L. macrophylla*, *L. Harrisoniae*, *Cattleya intermedia*, *Vanda cristata*, *Promenaea stapelioides*, *Oncidium Papilio*, *Stanhopea insignis*, *Broughtonia sanguinea*, and *Cycnoches Loddigesii*.

Mr. Forster exhibited two collections of Pelargoniums in very good condition; an extra prize was given. Mr. Chapman received a Small Linnæan for 12 scarlet Pelargonium compactum.

Fuchsias, for collections of 8, Mr. Roser gained the Small Victoria: he had a good *F. corymbiflora*, with about 40 bunches of flowers. Mr. Robinson, Mr. Corbin, and Mr. Jenkins exhibited in this class. In the nurseryman's class, Mr. Jennings obtained the Small Victoria, Mr. Fowle the Large Linnæan, Mr. Pawsey the Small Minerva. Mr. Fowle, of Brixton, and Mr. T. Banks, of the New Kent Road, had seedling Fuchsias. A first class certificate was given to one of Mr. Fowle's, named Exquisite; the flowers are short and broad, with a short pink tube, pink sepals tipped with green, and dark petals: the habit is good, and blooms abundantly. One of Mr. Banks' had small flowers, with nearly white tubes and sepals, and dark petals.

Petunias were numerous. Mr. Fowle had plants of 12 varieties, containing *Peliana*, *Pct*, *Queen of May*, *Kentish Beauty*, *Fowle's Una*, a rosy lilac, veined, of good shape; and *Girling's Portrait*, a pretty lilac, veined. Mr. Ivery, of Peckham, had also a collection; among the best were *Ivery's Prince Albert*, rose-crimson; *Ivery's Pet*, small, rosy lilac, veined, with small blotches round the margin; *Ivery's Reliance*, lilac, veined; *Girling's Perfection*. Mr. Conolly, of Brixton, had a dozen plants of finely grown Cockscombs, to which an extra prize was given. Mr. Ivery had a seedling *Delphinium*, named *Iveryana*, in the way of the double Chinese, with double blue flowers. Mr. Fowle had a collection of Verbenas. Mr. Fry, Mr. Smith, and Mr. Ottey, had stands of Cut Blooms. Mr. Wood had a collection of Alpines; Mr. Fowle had, of his *Antirrhinums*, *luteum*, *delicatum*, *atrostriatum*, *Fowlii*, *venosum*, and several others.

The collections of Cut Flowers were very numerous. The best was produced by Mr. Bruce, who had the Large Linnæan awarded to him. Another collection from Mr. Hamp, received the Small Minerva, and Mr. Parsons received the Small Linnæan. The Small Victoria was given to Mr. Robinson. In the nurserymen's class, a Small Victoria was given to Mr. Chapman, whose col-

lection contained a box of carnations and picotees. Mr. Jennings received the Small Linnæan for a collection. A Small Minerva was given to F. B. Garty, Esq., as an extra prize for cut flowers arranged in a device. There were several collections of cut British plants. Mr. Williamson, of Kew, gained the Small Linnæan for a very good group. Mr. Hood produced a collection of British mosses.

*Roses.* In the amateurs' class, the Large Linnæan was given to Mr. Terry, the Small Victoria to Mr. A. Parsons. The nurseryman's Large Linnæan was awarded to Messrs. Paul and Son, and the Small Victoria was given to Mr. Francis. For Pansies an extra prize was given to Mr. Hall.

The display of Carnations and Picotees was exceedingly good. Two five guinea cups were offered by Mr. J. Dickson, one for carnations and the other for white ground picotees. The former was won by Mr. Edwards, of Holloway, whose stand contained Wood's William the Fourth, Puxley's Prince Albert, Ely's William à Beckett, Milwood's Premier, Spong's Duke of York, Hale's Prince Albert, Tomlin's Briseis, Smith's Mrs. Smith, Smith's Duke of Wellington, Mansley's Beauty of Woodhouse, Brook's Flora's Garland, and Chadwick's Brilliant; Mr. Embleton being second, and receiving an extra prize. Among amateurs, the Gold Medal was awarded to Mr. Reeves, who had Beauty of Woodhouse, Lady Rowley, Squire's Defiance, Strong's King, Armato, Lady Bamborough, Smith's Duke of Wellington, Wilson's William the Fourth, Jacques' Iris, Wilmer's Hero, Wilson's Harriet, and Strong's Alfred. The Large Linnæan was given to Mr. Trevers, the Small Victoria to Mr. Leach. Mr. Edwards and Mr. Alloway also exhibited in this class. Among Florists, Messrs. Norman obtained the Large Linnæan for Brooks's Flora's Garland, Smith's Lord Combermere, Cartwright's Rainbow, Mansley's Beauty of Woodhouse, Ely's Sir R. Hill, Wildman's Buonaparte, Wilmer's Duke of York, Holmes' Count Paulini, Puxley's Prince Albert, Ely's Lady Ely, Ely's John Bright, and Hepworth's True Briton. Mr. Dickson's Cup for picotees was won by Mr. Edmonds with Burrough's Lady Douro, Wildman's Isabella, Burrough's Miss Jane, Edmonds' Prince of Wales, Mrs. Barnard, Sharp's Wellington, Mrs. Bevan, Ely's Favourite, Wilmer's Princess Royal, Green's Queen, Sir W. Middleton, and Duke of Newcastle. Mr. Leach obtained an extra prize.

In the amateurs' class, the Gold Medal was also won by Mr. Edmonds with Green's Queen, Seedling 104.; Lady Alice Peel, Burrough's Miss Jane, Mrs. Barnard, Mrs. Bevan, Edmonds' Prince of Wales, Wildman's Isabella, Lady Chesterfield, Barraud's Bride, and Ely's Field Marshal. Mr. Embledon obtained the Large Victoria, Mr. Newhall the Small Victoria; Mr. Leach and Mr. Trevers were competitors. In the florists' class, Mr. Keynes won the Large Linnæan with Burrough's Mrs. Bevan, Ely's Field Marshal, Brinklow's Lady Chesterfield, Crash's Queen Victoria, Tandy's Victoria, Dickson's Trip to Cambridge, Burrough's Duke of Newcastle, Sharp's L'Elegante, Kirkland's Augusta, Wilmer's Princess Royal, Sharp's Cleopatra, and Ely's Favourite. Mr. Norman obtained the Small Victoria, and Mr. John Dickson the Small Minerva.

## TO CORRESPONDENTS.

**ONE OF US.** — *Tropæolum edule*, *T. Lobbianum*, *T. Moritzianum*, and *T. pentaphyllum*, are all that are suitable for the trellis at the back of a greenhouse, and *they* will cover a large space. Any respectable nurserymen will supply them. The two first are rather high-priced. The other species we should recommend you to procure are *T. Jarratii*, *T. azurea*, and *T. brachycerus* (see last July No.), though they will not succeed in the situation mentioned, but require to be grown in pots, and trained to a light wire trellis.

**LEOPOLD BOSSANGE.** — We regret exceedingly the accident which has happened to your plant, as we feel very curious to know what it can be, and shall certainly hope for the opportunity of seeing it next year. If it belongs to *Liliaceæ*, there is or was *certainly* a bulbous root attached to it, which you have not mentioned, and may still remain where the plant was placed. Your letter did not reach us till too late for last month.

**A GARDENER.** — The last edition of Donn's *Hortus Cantabrigiensis* is the only perfect catalogue; it contains all the introductions up to the date of its being published, which is very recent.

**X. T.** — We really see no difference in the Dahlia sent as a seedling and the old "Nonpareil."

**J. DE L.** — Yes, we can recommend a person who will suit you exactly.

**F. SIMPSON.** — Only No. 4. of the seedling Fuchsias is worth preserving; the tube and sepals of this are bright carmine, very smooth, and large, and contrast finely with the rich purple corolla. We only wish the latter was larger; if it is a free bloomer, it will make a desirable variety. Nos. 6. and 10. of the Petunias are, as nearly as we could judge, finely-formed flowers; the first a deep rose, which is remarkable for having a light-coloured throat; the other a pale lavender, with bright irregular edging of pale crimson.

**E. THOMPSON.** — Good for nothing.

## CALENDAR FOR OCTOBER.

Of flowering plants, the only native species marked as expanding its bloom during October is the Ivy, the berries of which also ripening during the winter afford a considerable supply of food to various birds when few other berries are to be had, with the exception of the Mistletoe. But if flowering plants are scarce, the cryptogamic forms are very numerous, and will afford considerable employment to those anxious to become acquainted with the very various and often singular forms which they assume. Among these perhaps the most curious and beautiful are the Jungermannias, common in damp places among moss, on trunks of trees, &c. The filmy and transparent texture of their leaves, singular outline, and beautiful green colour of many render them excellent objects for drying, as they retain their colours, and might be arranged in various ways on paper, as is done with the finer sorts of seaweeds. Many mosses will be in perfection during the month, and a collection could be easily formed by any person wishing to study them closely. An old wall, or pile of artificial rock-work, damp corners where nothing else would vegetate, and various other places, even a damp stove, might be used for such a purpose, and a large collection might soon be formed, and studied at leisure.

In the Flower-Garden all plants intended to be potted up should, if possible, be secured before frosted; if not up they should be protected until they can be lifted, and properly put by for the winter. The beds should be prepared for spring bulbs as they are emptied of their summer plants, and the bulbs planted before the end of the month. With Crocus edgings, and a few beds filled with Hyacinths of distinct colours, an excellent effect can be produced early in spring, not to mention the many other species of bulbs which may be applied to a similar purpose. All bulbs should be planted immediately they show the least indication of growth, to keep them out of the earth after that only weakens them, and consequently injures the future bloom.

In the Greenhouse and pits care must be taken to avoid damp as much as possible, the plants not requiring much water

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at this season. All plants potted up in particular must be carefully guarded against wet, merely enough water to keep them from absolutely shrivelling being quite sufficient for them. A free admission of air, so that the temperature be not too much reduced, is the best preventative of damp, whenever the weather permits.

In the Stove the temperature should range from 56° to 60° during the night, to 70° to 75° by day, according to the state of the weather; which will also regulate the supply of moisture, bearing in mind that in the dull season approaching a less humid atmosphere is required. A point of some importance to attend to now, where hardy shrubs and other plants are required for early forcing, is to let them get pretty dry at the root, and thus throw them into as complete a state of rest as possible. They will be found to be more easily excited when introduced to the house, and will progress more evenly.

D. M.

**FLORISTS' FLOWERS.** The smaller offsets, seedlings, and indeed the general stock of spare roots of Tulips, may be planted by about the middle of the month with advantage, as it induces a vigorous growth when the roots are put into the ground at an early period; the principal flowering bulbs, on the contrary, are better when planted as late as can be done with safety, especially those of a coarse strain.

Picotee and Carnation layers will require early attention to get them potted for the winter, and should be proceeded with as speedily as possible, that they may become timely established: loam, free from all admixture, is decidedly the best material to winter them in.

A few Anemones and Turban Ranunculus may be planted for an early bloom.

Dry off the pot roots of choice Dahlias, and observe to place a good layer of rotten leaves or mulch over the roots of those in the ground, as a protection against the first frosts.

P.





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ON THE GENERA DELPHINIUM AND SALVIA.

WITH AN ILLUSTRATION,

OUR accompanying plate contains a group that may fairly claim to rank among the most interesting and useful of the long list of hardy ornamental plants. They afford another instance of what may be done in the improvement of races, by attention to the production of seedlings, the whole of them being seminal varieties of old and well known species, though so great a difference exists in the present and normal condition of the kinds.

1. *Delphinium Iveryanum* is a double variety of *D. Chinense*, a species introduced from Tartary in 1819, and an universal favourite. It has given birth to several varieties until it is completely obscured by its own progeny, the present far surpassing all previous ones. Its name is a compliment to Mr. Ivery, the enterprising nurseryman of Peckham, to whom we are indebted for the three subjects which form our plate. It is a dwarf variety, seldom attaining more than two feet in height.

2. *D. splendidum* was obtained, we believe, from *D. grandiflorum*, a species originally brought from Siberia, above a hundred years since. The variety attains a height of about 3 feet, fully one half of which is taken up with the spike of flowers, and these being produced numerously from the base of estab-

blished plants, present an object which really deserves its name.

The value of this lovely tribe of plants for flower-gardening purposes is estimated so highly, that we find some members of the genus in every place possessing but the least claims to excellence, and justly do they merit this preference, whether founded on individual beauty, or their collective elegance and pleasing variety; for such is the intense lustre of the majority, that let a species be introduced where it may, it is sure to attract admiration, and we strongly recommend their yet further adoption as of great assistance in the purposes of summer embellishments; and the more especially now as they indicate an increasing tendency to improve and vary in proportion to the care bestowed on them. Their cultivation is of the easiest description, the majority requiring merely to be planted in good garden soil, where, from their naturally hardy and vigorous character, they speedily form considerable masses, and bloom most abundantly. There are, however, a few of the finer kinds, such as *D. Chinense* and its varieties, together with *D. intermedium*, *azureum*, and the double varieties of *grandiflorum*, that require a slight protection, such as that afforded by a cold frame, in severe weather, and this more for the purpose of warding off a superfluity of moisture than from any inherent inability to withstand the cold. The whole of them may be increased by division of the stool or root, and the single flowering kinds, by means of their seeds. The comparatively tender kinds just mentioned should be divided on the approach of winter, and be then potted separately in rather small pots filled with light fibrous loam, and being placed in a common frame will be secure for the following season. This description of loam is perhaps the best material in which to preserve nearly all kinds of plants through the damp weather of our winter months, as it retains about the roots of the plants a proper amount of moisture for a long time, thus preventing the necessity of frequent applications, and yet, from its porous texture, water is never present in any excess; and further, from the same cause, the soil is far less subject to the violent rending, observable in closer soils, by the action of frost.

The following brief summary of the most interesting portion of the genus may be useful to those forming collections of

herbaceous plants, a class entitled to much more attention than they often receive:—

*D. Ajacis*, so called from a fancied resemblance in the markings of the flowers to the letters A J A. It is an annual, producing pink blossoms. A native of Switzerland, whence it was brought in 1573, and is by some considered to be a variety of the species *Consolida*.

*D. amœnum*. A perennial with pale blue flowers, introduced from Siberia in 1818; it is of rather rambling habit.

*D. azureum*. A perennial with beautiful bright blue flowers; it is a tall growing species, well suited for the centre of a group, and coming from Carolina, is somewhat tender.

*D. Barlowii*. A beautiful hybrid, with shaded flowers of an intense dark blue; should be in every collection.

*D. Consolida*. An indigenous annual, producing flowers of several shades of blue, but always beautiful, and well deserving a place in every garden.

*D. Consolida pleno*. A double variety of the above, bearing blue flowers occasionally interspersed with red; it is comparatively tender.

*D. chinense*. A perennial from China, introduced in 1818; the flowers are of an intense deep blue, and being of dwarf habit, the plant is a general favourite. As already mentioned, there are several varieties of this species.

*D. elegans pleno*. A double seminal variety, perfectly hardy; the flowers are dark blue.

*D. grandiflorum*. A perennial from Siberia; its flowers are very dark blue. There are three varieties of this species besides that now figured: the *album*, a very good white; *pallidum*, having pale blue flowers; and a double one: they are all beautiful.

*D. peregrinum* and its varieties are too well known to require any description.

*D. Requienii* is a curious biennial, with pale blue, from the island of Majorca, whence it was brought in 1824.

Besides these there are a few others remarkable for their colours, which are at present very scarce: these are *ochroleucum*, yellowish white, *pseudo-peregrinum*, red, and *revolutum*, pale blue; all of them are hardy herbaceous perennials. In fact, though a few of those mentioned in the foregoing remarks

are distinguished as comparatively tender, it must be understood that in favourable situations, on soils not retentive of moisture, the whole of them will bear perfect exposure with impunity.

The generic term *Delphinium* is derived from the Greek *dolphin*, a dolphin, from a fancied likeness of the nectary to the imaginary figures of those fishes.

The third figure of our plate, *Salvia capensis grandiflora*, is also a seedling variety, derived from *S. capensis*, a species that has hitherto eluded enumeration in the catalogues. The superiority of the variety consists in its longer and more densely filled spikes of flowers. It is a dwarf herbaceous plant, most profuse in its blooming, and well calculated for bedding, or to be planted singly among rock-work, where, from the number and lively pleasing colour of its flowers, it forms a most attractive object. It is, moreover, likely to be found quite hardy in tolerably good stations that have efficient drainage, or, at most, will not require more than to be included with plants usually preserved in a cold pit.

Since the introduction of *S. patens* in 1838, very little has been heard of this extensive and extremely beautiful genus. We are much surprised that experimental cultivators do not take it into their notice, and the more so when the long list of species it presents, and their many colours and characters, are taken into consideration. Surely from among upwards of a hundred different kinds something may be obtained that will repay the search, and it must be remembered they are all of easy culture, and not difficult to obtain. However, with this hint we leave the subject for the present, and conclude by again recommending each of the plants figured as being certain to please the most fastidious.—ED.

## THE PRESERVATION OF BEDDING PLANTS.

THERE is a method of preserving tender bedding plants, such as Verbenas, Scarlet Geraniums, &c. through the winter, which, though not new, deserves mention, and much more general adoption than it receives at present; from its universal applicability, and the great success attending its employment, I think this neglect can only arise from the method not being sufficiently known.

It is simply to build up a bed of peat, about eighteen inches or two feet in height, in the manner of a common hot-bed, only continuing the outer sods a foot higher than the interior, to form a wall on which the lights are to rest; these walls must be made secure with stakes driven through them, and a slight curb placed on the top, and the job is complete; the plants are then planted at regular intervals over the bed, and with the lights on and the attention to covering, &c. usually given to pits, will bid defiance to the severest weather of our winters. It will be seen the method is inexpensive, as the peat will be in an excellent state for using in the following summer, and the plants themselves occasion far less trouble, as they require no water after the first application at planting, and from being well established in the soil are enabled to withstand uninjured a degree of cold that would be fatal to them in pots; in fact, though it should happen that some of the branches catch a little frost, it is next to impossible that the roots or lower parts of the stem can, from the amount of radiated heat that will be given off from the body of the bed whenever the external temperature is below that of the bed.

The plan is one which seems peculiarly suited to the amateur cultivator, as it simplifies and renders easy one of the most troublesome points in his practice.

HORTULANUS.

## ON FORCING FLOWERS.

BEING of opinion that a seasonal hint is of more value in a practical sense than the most elaborately written treatise pre-

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marked at an ill-timed period, we offer the following remarks on the subject, not as containing any new doctrine, or as a learned disquisition on cause and effect, but that the beginner, and those who delight in giving personal attention to their floristic pursuits, but who are not professionally engaged in the pursuit, may have some guide to their operations, and a timely knowledge (if only a primary one) of the principles on which they are or should be working.

Perhaps the most correct idea of these principles would be gained from a close observance of Nature's laws, and the position of the plant in its original or wild state; for if possessed of a knowledge of the natural habits of his plants, their precocity or tardiness to flower, their stations, and an acquaintance with the average temperature of their native localities at the period of blooming, the culturist would be enabled to estimate, with great exactitude, the quantity of stimulative power necessary to the production of flowers at a given season, by increasing the artificial temperature above the natural one, in a corresponding ratio with the required and natural periods of blooming. Still all this information is not easily obtainable, and if it was, would be rather cumbersome in practice; therefore it is that certain rules deduced from the experience of many are usually employed without reference to other matters, that perhaps from being misplaced, or not rightly understood, would lead the tyro to an erroneous conclusion.

The forcing of flowers, in the correct acceptance of the term, is the production of blossoms at a season quite distinct from that in which the plants would bring them forth if left to natural influences, and in the successful working requires, first, a full and decided maturity of all the various organs of the plant: this infers a previous developement at least perfectly healthy, if not luxuriant; for it will be found that the beauty of the forced flowers depends very much on the growth of the foregoing season, and will be rich or meagre, all other circumstances being the same, in an exact proportion to its vigour. Secondly, the plants to be operated on should be thoroughly established before their introduction to an elevated atmosphere, that they may have acquired the means of immediately supplying the necessary aliment to meet the demands of an increased circulation, and accession of new parts; there is a great difference, even in the limited number of plants that are

usually subject to this treatment, in the time required to effect a perfect re-establishment; some of them may be obtained in a proper state in a few weeks, while others will not bear to be forced until they have received a year's preparation. The first class consists of bulbous-rooted and herbaceous plants, which form an entirely new set of organs in each season, and the latter includes Roses, Rhododendrons, and other hard-wooded plants that have a more persistent system; these are absolute in requiring to be potted at least six months, so as to allow them to form a season's roots before being forced.

The next essential point of management lies in the manner of applying the necessary heat, and on it the success of the whole may be said to hinge; for whatever care or skill may have been expended, any misapplication here will render it all void. The increase should be brought about in a gradual manner, so as to resemble as nearly as possible the advances of spring, whose functions it is intended to anticipate; the absurd practice, so prevalent a few years since, of removing a plant from the open air in the depth of winter to a temperature of some  $55^{\circ}$  or  $60^{\circ}$ , and of which some traces even yet remain, must appear preposterous when we consider the object sought by the change. Was ever so great a difference known to occur in a day and a night at any part of the year, or any portion of the world? This, or whatever else is so violently opposed to nature's laws, must be erroneous in practice. The temperature above mentioned ( $55^{\circ}$  or  $60^{\circ}$ ) is that in which most plants will expand their flowers; and to reach it from the average temperature of our winters, at least two intermediate stages are necessary: the first, of about  $35^{\circ}$ , is usually afforded by a cold frame, and the next, of  $45^{\circ}$ , or greenhouse temperature. After a suitable stay in each of these climates, which will vary with the nature of the plants, say, for the soft-wooded or herbaceous class, ten days or a fortnight, and for the others a little longer, they may be safely introduced to the highest temperature. In the ordinary and proper development of the organs of a plant, the action commences with the roots, and proceeds gradually upwards, as displayed in the bursting of the leaf, the formation and expanding of the flower-bud, and, finally, the perfection of the seed. This is the natural course of the vital energy; but when the plant is placed at once into a comparatively high

temperature, the action commences in the stem or above the roots, an abortive production of leaves or flower-buds is made, which, from the inaction of the roots and consequent want of food, after lingering for a time, necessarily wither and die. Hence the propriety of a gradual application of heat, that the excitement may begin at the proper place and be continuously increased until it reaches the perfecting point.

The only other matter of consequence connected with the subject relates to the proper supply of water. This, as part of the stimulative system adopted in forcing, should be subject to the same rules which regulate the supply of heat; it should be given in the same limited manner at first, and increased with the increase of temperature resulting in a full supply every day at the period of blooming. It is only necessary to add, that a considerable diminution of both heat and moisture will be required immediately after the expansion of the flowers, in order to prolong their existence, and preserve their brilliancy; this is easily effected by the usual plan of removing them to a cooler place, where their loveliness will be more enjoyable than in the close humid atmosphere of a forcing-house.

ED.

### DISEASE IN DAHLIAS.

HAVE you received intimation of the presence of a disease, similar to that of the potato, in the roots of the dahlia this season? I was induced to examine mine about a month since, from the circumstance of a stem dying off here and there, and occasionally an entire plant, and found then that several of the tubers were infested with a gangrenous disease; and on a recent examination I perceive it has, in too many instances, extended throughout the whole root: do you believe it to be prevalent? and what remedy would you propose?

I have for several years past preserved my dahlias through the winter in a clamp, in the same manner that potatoes are kept, and have found them to do exceedingly well. Do you think it advisable to continue this plan with them in their pre-

sent state; or shall I adopt some other method? In short, please to advise what course I had better pursue, for I am in sore tribulation.

## SURREYENSIS.

[We had not heard before, that the Dahlia has exhibited symptoms of an attack from the disease unfortunately so very general in the potato crop, but the above communication fills us with apprehensions; though from the excellent condition of the blooms we have seen this season from nearly all parts of the kingdom, we are disposed to hope it is only partial. The best remedial course will be to take up the root at once, cut all the infected portions clean out, and dust the cut parts over with quicklime, and afterwards pack them away in pounded charcoal. The great object will be to preserve them as dry as possible through the winter, and for this purpose a clamp will be unsuitable: we should prefer a dry closet, or the best part of a good shed, if the collection is large.]

## GLOSSARY OF TERMS USED IN BOTANICAL DESCRIPTIONS.

(*Continued from p. 227.*)

**CIRRIFEROUS, CIRRHOS.** Furnished with tendrils.

**CIRRHOUS.** Curled like, or assuming the functions of a tendril.

**CIRRUS.** A tendril, an organ proceeding sometimes from the stem and branches, and occasionally from the apex of the leaves, and possessing a spiral spring-like power, by which the plant is enabled to cling to surrounding objects, and support itself.

**CITREUS, CITRINUS.** Lemon colour.

**CLASS.** One of the first great divisions of plants in botanical arrangement. In the Linnæan system they are 24; but in the natural system, now of universal adoption, the number is reduced to 2.

**CLATHRATE.** Applied to the veins in the foliated parts of

plants, where they are disposed in the manner of lattice-work.

**CLAVATE.** Club-shaped.

**CLAVELLOSE.** Covered with or made up of club-like protuberances.

**CLAW.** The lengthened base of a petal, by which it is connected with the receptacle.

**CLINANDRIUM.** A depression of the column of Orchidaceous plants, in which the anther lies.

**CLINANTHIMUM.** The dry woody receptacle of composite flowers, to which the base of the florets is attached.

**CLYPEATE.** Buckler-shaped.

**COACERVATE.** Growing together, clustered.

**COADNATE, COALESCENS.** Joined, coherent.

**COATED.** Having a distinct external layer harder than the internal, as the rind of fruit, &c.

**COB-WEBBED.** Covered with a soft, thin, white pubescens, like a cob-web.

**Coccineus.** Scarlet ; this term is frequently used in far too lax a manner, being erroneously employed to designate nearly every shade between orange and crimson.

**COCHLEATE.** In general acceptation shell-shaped, though strictly the form should be the spiral one of the snail shell.

**CODIOPHYLLUS.** Having leaves covered with short woolly hairs.

**COHERING.** Expressive of an union of similar parts, as where the petals of a flower are joined so as to form a tube.

**COLLUM.** The neck, synonyme for Cingulum.

**COLUMELLA.** A central axis, round which the carpels of some fruits, and the thecae of mosses, are arranged.

**COMA.** The aggregation of parts which form the head of a plant ; also tufts of hairs on certain seeds, and sometimes applied to roots which have numerous hair-like ramifications.

**COMMINUTED.** Crushed, pulverised.

**COMOSE.** Descriptive of the tuft of sterile bracteæ on the summit of the inflorescence of certain plants, as the *Hyacinthus comosus*, &c.

**COMPACTUS.** Pressed together, close.

**COMPLICATE, COMPLEXIVUS.** Entirely folded over another.

**COMPLICATE-CARINATE.** Folded together so as to form a keel.

**COMPOUND.** Expressive of the union of several similar parts, so as to form a distinct whole; thus, a compound leaf is formed by the combination of several leaflets, and a compound umbel by several simple umbels.

**COMPRESSUS, COMPRESSED.** Flattened or pressed together.

**CONCAVE.** Hollow, without angles.

**CONCENTRIC.** Lines proceeding at equal distances round a common centre.

**CONCRETE.** Hardened into an entire mass.

**CONDUPLICATE.** Folded longitudinally and closely together.

**CONE.** A compound fruit, formed by the regular arrangement of scale-like carpels round an axis.

**CONFERTUS.** Densely crowded.

**CONFERRUMINATE.** So closely united as to be undistinguishable.

**CONFLUENT.** Sticking or run together.

**CONFORMIS.** Assimilated; a resemblance between two parts.

**CONGESTUS.** Applied to leaves when folded up without regularity, and to the inflorescence when collected into a spherical head.

**CONGLOBATE.** An aggregation of florets into a spherical form.

**CONGLOMERATUS.** Collected together, clustered.

**CONICAL.** Resembling a cone, or assuming the figure of a true cone.

**CONJUGATE.** A pair of leaves joined together in the manner of a pinnate leaf.

**CONNATE.** When the base of two opposite leaves completely encircle the stem.

**CONNIVENT.** Approaching together.

**CONOID.** Rising from a circular base to a point, like a cone.

**CONSERVATIVE ORGANS.** The alimentary organs of a plant, as the root, stem, and leaves.

## LIST OF NEW PLANTS.

AMARYLLIDÆ. — *Hexandria Monogynia*.

*Habranthus concolor*. Zephyranths and Habranths are plants so nearly related to each other, that some care is necessary in distinguishing them. The main difference is found in the interior of the flower, where the Habranths have, on the outside of the stamens, a small cup, composed of a membrane, or of certain toothings or scales, which are deficient in the Zephyranths, or at least hardly discoverable. In habit the one-flowered Habranths are the same as the Zephyranths.

In the present species, the cup consists of a membranous ring, cut into irregular toothings or lacerations, and here and there slit down to the base. The flowers, although pale green, are very pretty, and form a lively ornament of the greenhouse or cold frame, in the early spring. Mr. Hartweg found it in pastures near the city of Leon in Mexico, whence he sent its bulbs to the Horticultural Society, in whose gardens it flowered in April last. — *Bot. Reg.* 54—45.

BERBERIDÆ. — *Gynandria Monandria*.

*Berberis actinacantha* syn. *Mahonia Knightii*. An evergreen bush apparently common in the neighbourhood of Valparaiso, whence it has been brought by all collectors of Chilean plants. It is not, however, a plant of the coast, but inhabits the first range of the Cordilleras. It derives its name from the broad ray-like divisions of the spines, which, though variable, are often very remarkable; the leaves too vary in form from roundish ovate to ovate and even subcordate; they always have a hard, dry, curled appearance, as if the species were accustomed to a rigorous climate; its deep yellow, sweet-scented flowers render it rather a conspicuous object of the smaller sort, and it is quite hardy. — *Bot. Reg.* 55—45.

MONIMIACÆ. — *Gynandria Monandria*.

*Boldoa fragrans*. This is a small tree or bush with a highly aromatic odour in every part. It has round, grey, slightly downy branches and roundish ovate evergreen opposite leaves placed on short stalks, and studded with hard points, which give them a very rough surface. The flowers are diæcious, pale greenish white, in little terminal panicles, each branch of which is rather regularly three parted. In this country the male only is known. Of that sex the calyx is a leathery cup divided at the edge into an uncertain number of strap-shaped segments placed in two or three rows; all the inside of the cup is lined with stamens, whose filament bears at its base a pair of ear-shaped glands, terminated by a half transparent rim. In Chili the plant is much valued; its wood forms a charcoal preferred by smiths to all others, and the aromatic fruit is eaten by the natives. With us it is a greenhouse shrub, which requires to be potted in sandy loam and peat in equal proportions, and in summer an ample supply of water is necessary, and shading in sunny weather, for although it be a hardy-looking shrub, its leaves are very apt to become scorched by the sun. — *Bot. Reg.* 57—45.

SPIRÆACEÆ. — *Icosandria Di-Pentagynia*.

*Spiraea Douglasii*. An extremely beautiful species producing dense, compound, terminal racemes of rosy-lilac flowers, very numerously and upon very small plants. It was first discovered by the lamented and indefatigable Douglas in his explorations of the north-west coast of America, about the

Columbia and the Straits of Tuca; but it was not introduced to this country by him. Within the last five years a few plants were reared in the Glasgow Botanic Garden, from seeds sent to the curator, Mr. S. Murray, by Dr. Tolmie, who gathered them at Fort Vancouver; blossoms were produced by these plants for the first time about two years ago, and it has lately been flowered by Messrs. Low & Co., of Clapton Nursery. The plant is quite hardy. — *Pax. Mag. Bot.*

E. — *Pentandria Monogynia.*

*Mussaenda macrophylla.* An upright spreading shrub, of a noble aspect; the branches amply adorned with a most luxuriant foliage, and terminating in fine corymbs of orange blossoms, which have an increasingly rich appearance from the three broad almost snow-white floral leaves that stand around them. In its native country, according to Dr. Wallich, it sometimes acquires a tendency to ramble, when growing in places where the roots spread amongst an over rich soil, and it is not unlikely that plants under cultivation in our stoves might do the same, if subjected to a close, much-heated atmosphere. At the Exotic Nursery, Chelsea, it forms a bush about 3 feet high, of the most perfect symmetry. It was found by Dr. Wallich's collectors on the mountains of Chundragiri and Majorjoon in Nepal. — *Pax. Mag. Bot.*

RUBIACEÆ. — *Pentandria Monogynia.*

*Exostemma longiflorum.* A curious, low, stove-shrub, about a foot and a half high with lanceolate leaves and singular white flowers, the tube of which is very slender, and about 6 inches in length, cylindrical, slightly widening upwards, and suddenly expanding into the five segments of the limb, which are one third as long as the tube, very narrow, and completely reflexed when thoroughly expanded; Lambert gives Guiana as the native country of the species; while De Candolle, on the authority of Richard, says it is indigenous to St. Domingo. — *Bot. Mag.* 4186.

PASSIFLOREÆ. — *Monadelphia Pentandria.*

*Tacsonia mollissima.* A beautiful greenhouse or conservatory climber with large rose-coloured flowers somewhat like those of the passion-flower. It is a native of the elevated districts of New Grenada, growing at a height 9000 or 10,000 feet above the level of the sea. Humboldt found it about Santa Fé de Bogota, and Mr. W. Lobb in woods near Quito; from his seeds Messrs. Veitch have raised plants which have bloomed throughout the past autumn. — *Bot. Mag.* 4187.

LEGUMINOSÆ. — *Monadelphia Polyandria.*

*Calliandra Tweediei.* An elegant shrub belonging to a genus of *Mimosæ* distinguished by the great length, and frequently rich red colour, of the stamens. Sixty species are enumerated by Mr. Bentham in the London Journal of Botany, all inhabitants of the American continent. They have, Mr. Bentham observes, the corolla of *Albizia*, the stamens of an *Inga*, and a pod different from that of any other genus, the valves of the pod rolling back elastically in a very remarkable manner. The present species is a native of Rio Grande and Rio Jaquy in South Brazil, where it was found by the indefatigable botanist whose name it bears. It requires the heat of a stove, where it produces its lovely crimson flowers in a copious manner. — *Bot. Mag.* 4188.

LARINEÆ. — *Didynamia Angiospermia.*

*Franciscea acuminata.* A handsome Brazilian shrub presented by Mr. Low of Clapton to the Royal Gardens of Kew, where it flowers in the stove during the months of June and July. It was received under the name of

*F. Pohliana*, probably a mere garden name, which ought not to be retained, for it is assuredly the *F. acuminata* of Pohl. It is a very desirable hothouse plant, wanting indeed the delicious scent of *F. Hopeana*, and the handsome foliage of *F. hydrangeaformis*, but nearly equal to the latter and superior to the former in the flowers. Mr. Bentham has united this genus and *Brunsfelsia* in the descriptions of *Scrophularineæ* for the forthcoming volume of De Candolle's *Prodromus*. — *Bot. Mag.* 4189.

ORCHIDACEÆ.—*Gynandria Monandria*. \*

*Odontoglossum Cervantesii*. A lovely species, with small ovate angular pseudo-bulbs, and solitary oblong leaves, producing a 4-5 flowered scape of beautiful medium-sized blossoms, the ground colour of which is a delicate pale rose, the sepals and petals being marked with several concentric broken rings of dark brown, the lip is sub-cordately ovate and acute (as also are the petals), and is devoid of the band-like markings which distinguish the other portions of the flower. A specimen which Messrs. Loddiges received from Oaxaca flowered last March. — *Pax. Mag. Bot.*

*Schomburgkia undulata*. This plant was found by that indefatigable traveller Mr. Linden in December, 1842, in New Grenada, at the height of 2400 feet above the sea, on the rocks near Pandi, a place which in his herbarium he calls "the natural bridge of Icononzo;" the wild specimens having about 20 flowers in a head. Their colour, a rich chocolate-red, alone distinguishes them from both *S. crispa* and *marginata*, and the form of the lip from *S. tibicinis*. — *Bot. Reg.* 53—45.

*Gongora truncata*. Whatever opinion may be entertained respecting the specific distinction of other *Gongoras*, no one can doubt that this at least is very different from all that have been previously discovered. It is a Mexican species, introduced by Mr. Rucker, who received it from Mr. Linden, in 1840. We do not find any thing peculiar in the pseudo-bulbs or foliage; the characters of the species reside exclusively in the flowers, which are pale straw-colour with some brownish purple freckles and a yellower lip. Before expansion they are almost of the form of a bean, which is owing to their sepals being so blunt that when flattened they are nearly half oblong. The lip has no speckles at all and looks as if varnished; it is entirely pale yellow. — *Bot. Reg.* 56—45.

## FLORAL INTELLIGENCE.

### ROYAL SOUTH LONDON FLORICULTURAL SOCIETY.

THE 17th of August was the day appointed for the last exhibition for the season of this Society, and a more unfavourable one could not have occurred, a pitiless drizzle falling nearly the whole of the day, and only equalled in its uncomfortable consequences by that which fell on the occasion of the previous July meeting; indeed, the weather through the entire season has been most unpropitious to the South London shows, not one of the days appointed having proved at all serene, or such as

tinued adverse circumstances, ~~there were~~ - in the quality and number of the subjects present; members have contributed a good deal to this improvement; the society is again progressing to a useful position. This we are heartily glad of, for it occupies a place that ought to be well filled, being, as it were, a nursery to the other great metropolitan exhibitions.

On this occasion, those splendid autumnal flowers, the Dahlias, were very numerous and in excellent condition; every exhibitor of them certainly deserved to have received a prize, when we consider the dreadful season growers have had to contend with, and the beautiful manner in which they were produced. In the Amateur's class, the Gold Medal for the best 24 blooms was awarded to Mr. J. S. Proctor, sen., for Pickwick, Antagonist, Perpetual Grand, Nonpareil, Queen of Roses, Beauty of Sussex, Consolation, Indispensable, Favourite, Mrs. Shelley, Vivid, Standard, Beeswing, Unique, Raphael, Lady St. Maur, Essex Triumph, Victory of Sussex, Lord Howden, Competitor, Eclipse, Blue Bonnet, and Admiral Stopford. The Large Victoria Medal was given to Mr. Cook for the 2nd, the Large Linnaean to Mr. Trentfield for the 3rd, the Small Victoria to Mr. Legg for the 4th, and Linnaean to Mr. Edwards for the 5th.

The Large Victoria was awarded to

Mrs. Lady St. Maur, Eximia,

Blue Bonnet, Victory of

City, Gloria Mundi,

was obtained by

Mr. Wicks for

the 4th, and

Proctor, had



... y good. The  
**Gold Meda.** ... to MR. C. Turner for the following 24,  
Victory of Sussex, Perpetual Grande, Princess Royal, Alice  
Hawthorn, Competitor, Beeswing, Indispensable, Admiral Stop-  
ford, Beauty of the Plain, Springfield Rival, Aurata, Gloria  
Mundi, Cleopatra, President, Standard of Perfection, Raphael,  
Ophir, Essex Triumph, Bermondsey Rival, Mrs. Shelley, Non-  
pareil, Pickwick, and Mrs. J. Richardson. The Large Victoria

was taken by Mr. Widnall for the 2nd, the Large Linnæan by Mr. Brown for the 3rd, and the Small Victoria by Mr. Girling for the 3rd.

The extra prize offered by Mr. Cook for two blooms of his Albion was taken by Mr. Bushell.

The seedlings were numerous, and most of them very good. We must congratulate Mr. Keynes on the possession of such a magnificent flower as that he exhibited as a seedling of 1844, called Sir Edmund Antrobus; it is perfect, of large size, exquisite shape, and bright pleasing crimson-red colour, it was deservedly awarded a first-class certificate; Gaines's Princess Radzivill, a light rose, tipped; Girling's Queen of Perpetuals, pink; Trentfield's Lady Stopford, crimson-red; Prometheus, rosy purple, and Newington Rival, dark purple, from Messrs. F. & A. Smith, all received first-class certificates. There were many others; among the most remarkable we noticed a very promising white, the Marchioness of Cornwallis, from Mr. Walls of Hungerford; Mrs. Caudle, a dull orange, and Miss Prettyman, white with purple tips, from Mr. Turner of Chalvey, and Spary's Marquis of Ailesbury, a peculiar purple tint.

Besides these, Messrs. Collison, Bushell, and Brown received certificates for seedlings of 1845. There was also a tolerable gathering of plants, though the effects of the late period of the season and dull weather were apparent in several. Mr. Bruce received the principal prize, 5*l.*, for the best 18; among them were nice plants of *Epiphyllum speciosum*, *Gardoquia Hookerii*, *Erica Aitonii*, *Crinum amabile*, *Euphorbium splendens*, *Manettia bicolor*, &c.: the Gold Medal was obtained by Mr. Young for a similar number; among his plants was a very excellent *Erica ampullacea vittata*. The Large Victoria Medal was given to Mr. Doran for the best 12, and the Large Linnæan to Mr. Hamp for the 2nd ditto. In the Nurserymen's Class, the first prize, Large Victoria Medal, was taken by Mr. Pamplin with a collection containing very neat plants of *Achimenes longiflora*, *A. grandiflora*, *A. multiflora*, *Clerodendron squatum*, *Erica Irbyana*, &c.

For single specimens Mr. Dawson obtained the Large Victoria, for a splendid plant of *Erica Irbyana*, Mr. Bruce the Small Linnæan for *Witsenia corymbosa*, Mr. Cuthill the Small Minerva for an excellent specimen of *Lisianthus Russellianus*. Extra prizes

were also given to Mr. Mannock, gardener to C. Pritchard, Esq., of Clapham, for a nice little plant of *Lilium speciosum*, and to Mr. Pamplin for an excellent plant of *Gardoquia Hookerii*. A new Melastomaceous plant was exhibited by Mr. Mannock, with ample ovate leaves and large rosy lilac flowers, which apparently will be produced rather numerously.

The prizes for Fuchsias were awarded to Messrs. Corbin, Robinson, Gaines, and Jennings; we did not observe anything particularly new or striking among them; a seedling from Mr. Jennings, called British Queen, obtained a first-class certificate; it is a large flower, with pale rose-coloured tube and sepals and bright red corolla.

The Roses were numerous, and in beautiful condition; the prizes were awarded respectively to Messrs. Lane, Paul, and Francis. A great number of cut flowers were also present; the awards were, 1st, Mr. Bruce; 2nd, Mr. Parsons; 3rd, Mr. Garty; and 4th, Mr. Robinson; and in the Nurserymen's division of the class, 1st, Mr. Henbrey; 2nd, Mr. Pamplin. The extra prizes offered by Mr. Seldon for 24 Verbenas were taken by Mr. Smith and Mr. Henbrey; and that offered by Mr. Dutton for a floral device, also by Mr. Henbrey, though we confess our inability to discover the merit of the production.

Other extra prizes were given by the Society to Mr. Cuthill for a beautiful collection of *Lisianthus Russellianus*, Mr. Agate for Asters, Mr. Hall for Pansies, and to Mr. Conolly for Cocks-combs.

NOTTINGHAM FLORAL AND HORTICULTURAL SOCIETY.  
EXCHANGE ROOMS, NOTTINGHAM, JULY 30, 1845.

Best pan of nine blooms of Carnations: Martin's Splendid, Lord Milton, Defiance, Seedling, Lady Ely, Derby Willow, Confederate, Nehemiah, and Nulli Secundus; Mr. Pickering. Second ditto: Huston's Patriarch, Seedling, Earl of Leicester, Wilson's Harriet, Lord Byron, Robinson's Duke, Seedling, Nulli Secundus, and Vespasian; Mr. J. Taylor. Third ditto: Leader, Count Pauline, Grand Sultan, Mango, Lady Ely, Ely's Favourite, Prince Albert, Sir Robert Peel, and Mrs. Bevan; Mr. Staton. Fourth ditto: William Caxton, Sir Robert Peel, Lydia, Beauty of Woodhouse, Crucifix, Buonaparte, Mrs. Morner, Monarch, and Prince Albert, Mr. Pearson.

Best ten Picotees:—Marc Antony, Gidden's Teazer, Wood's Victoria, Cleopatra, Trip to Cambridge, Wilmer's Elizabeth, Nulli Secundus, John's Prince Albert, Fanny Irby, and Gidden's Diana; Mr. J. Gibbons. Second ditto: Ely's Favourite, Field Marshal, Crook's Albert, Ely's Mrs. Lily, Sir R. Peel, Gidden's Teazer, Mrs. Bosville, and Dickson's Trip to Cambridge; Mr. Staton. Third ditto: Robinson's Duke, Mrs. Horner, Sharp's Gem, Sharp's Duke, Nulli Secundus, Lady St. John, John's Prince Albert, Gidden's Vespasian, Miss Ellen, and Ada; Mr. S. Buswell.

Heavy red-edged Picotee (Duke of Wellington), Mr. Moore; second ditto (Derby Willow), Mr. Pickering; third ditto (Robinson's Duke), Mr. Taylor. Light red ditto (Queen During), Mr. Hirst; second ditto (Mrs. Horner), Mr. S. Buswell; third ditto (Sir Robert Peel), Mr. Robinson. Heavy purple ditto (Nehemiah), Mr. Pickering; second ditto (Trip to Cambridge), Mr. Gibbons; third ditto (Crask's Queen Victoria), Mr. J. Robinson. Light purple ditto (Ely's Favourite), Mr. Robinson; second ditto (John's Prince Albert), Mr. J. Robinson; third ditto (Pickering's Harriet), Mr. Pickering. Heavy rose (King of Roses), Mr. Staton; second ditto (ditto), Mr. Hirst; third ditto (Pedestrian), Mr. J. Robinson. Light rose (Wain's Victoria), Mr. Pickering. Best collection, Mr. Pickering; second ditto, Mr. Staton. Best device, Mr. Hirst. The show of Roses and Miscellaneous Plants was both numerous and good: want of space alone prevents their insertion.

#### CALENDAR FOR NOVEMBER.

BUT few plants are to be found in perfection during the present month, if we except cryptogamic forms; these are abundant in all situations, from the sea-shore strewed with *fuci*, to the highest situations we can reach, where mosses and lichens still vegetate and fructify, cold though it be at such elevations. There are, however, a few plants approaching perfection this month, worthy of special attention from the pleasant associations which they call to mind — the Holly, the Mistletoe, and the Butcher's Broom,

or Knee Holme (*Ruscus aculeatus*), which last fruits sufficiently in its native woods in Sussex to allow of its being applied to the same purposes at Christmas as the previous mentioned shrubs.

If the amateur collector has been moderately diligent, the number of specimens collected will have become troublesome to refer to if some plan has not been decided upon for their arrangement. In fact, the question arises, is the Linnæan or natural system to be followed? The first is acknowledged to be entirely artificial, nor can the other be called any thing else, for no mere *lineal* method, the only one plainly reducible to paper, can ever be otherwise: but there is this great difference in favour of the last mentioned, that it collects all the really related genera and species into close contact, instead of spreading them through several classes, or collecting the most widely separated forms into the same order. For instance, in the order *Leguminosæ* we have one of the most natural groups of plants that can be, yet, if we follow the Linnæan arrangement, we must widely separate them into two or three classes, and if we introduce exotic species, into a great many more. Examples might be quoted from almost every natural order in the British flora containing a few species, but enough has been said to prove the superiority of the natural arrangement where something more than the mere names of plants is wanted.

In the FLOWER-GARDEN no time should be lost in getting the beds intended for bulbs planted; not a bulb should be out of ground after the middle of the month. If we examine bulbs which have been left in the ground, we shall find the most of them pushing vigorous roots, thus plainly proving that any delay in planting would be injurious. All opportunities should be taken to sweep and roll the lawns and walks, and to keep the beds neat and clean. If any of the beds are filled with evergreens, as has been recommended, perhaps the best effect would be produced by filling only a few of the clumps with plants in pots, so arranged as to have the neatest and dwarfest near the eye, and the larger and sadder coloured sorts in the distance; a garden entirely filled would look very heavy.

Potted annuals in pits and frames must receive all the light and air possible, being careful not to over-water them, and to get the plants quite dry before closing the lights. Bulbs in-

tended for forcing, if not already done, should be potted and buried in sawdust, or better, sifted ashes, and if placed in a frame where they can be sheltered from excessive rains the better.

The GREENHOUSE must receive all the air that the state of the external atmosphere will allow, as the plants must be kept from any premature growth. Neatness of course must be strictly attended to, and if any signs of damping off of leaves, or in fact of damp from any cause, appears, advantage must be taken of the first favourable chance, and a fire lighted for a few hours during the middle of the day, and air given at the same time to expel all signs of this worst enemy to plants in houses during our winters.

In the STOVE all should be kept as much at rest as possible, but where there are so many individuals, of such different habits and from so many different climates, some are always in a growing state. For such the warmest end of the house should be chosen, but their growth should rather be held in check than encouraged. Great attention should be paid to keeping all sorts of vermin under, especially among the *Orchidaceæ*, where the wood-lice will otherwise commit great havoc. A very diminutive snail is also very destructive, but may be caught in considerable numbers, along with the above, by laying slices of potatoes, hollowed underneath, on the pots, and in damp corners where they retreat during day. Of course for the destruction of insects the toad must not be forgotten in hothouses, even in winter.

D. M.

FLORISTS' FLOWERS. Finish the planting of Tulips as early this month as the weather will permit, proceeding with them in the manner described in the last Calendar. Take up the Dahlia roots, and examine them closely, for fear of contagion among them; should disease be discovered, adopt the method mentioned at the end of a paper on this subject in the present Number. Tender Roses should now receive some protection, and those in pots be plunged to the rims in old tan or ashes. Auriculas, Picotees, and Carnations, must be protected from rain and very cold winds, keeping them moderately dry, with abundance of air both day and night in mild weather; attention must be given in spare time to the composts for spring, cleaning and painting sticks, labels, &c.

P.





THE  
FLORIST'S JOURNAL.

DECEMBER, 1845.

SIPHOCAMPYLOS COCCINEUS AND FUCHSIA  
SERRATIFOLIA.

WITH AN ILLUSTRATION.

OUR first plate this month represents portions of two plants, which attracted a very great share of attention at the metropolitan exhibitions of the past season.

No. 1. *Siphocampylos coccineus*. — For the possession of this plant we are indebted to the persevering efforts of that indefatigable collector, Mr. W. Lobb, who found it in shady places on the banks of the river Chagres, in New Grenada, and it was raised and flowered by Messrs Veitch, the eminent nurserymen of Exeter. It is a plant of great beauty, its brilliant scarlet flowers appearing in bold relief above the pleasing bright green leaves ; they are produced towards the points of the new shoots, and hence a hint in its culture which also applies to the whole genus, for all the species possess something of this character : in consequence, they require to have their shoots frequently “stopped” by pinching off the terminal bud in the early part of the growing season ; this, if repeated three or four times, will induce them to form dwarf bushy plants, which cannot fail to produce a profusion of flowers. All the species of *Syphocampylos* are greenhouse plants of the class which bear ex-

posure through the summer months with decided advantage. They also delight in abundance of root-room, and as they grow rapidly, if allowed large pots, speedily form handsome objects: occasional supplies of liquid manure will also accelerate and improve the developement of their shoots, and if attention is given them in the growing season, the flowers are certain to be copiously displayed. In the autumn the plants should be cut closely into the old wood, so as to keep them dwarf; and further, they should be retained in a dormant state through the winter among other plants of similar character, which usually find protection in pits, until the return of spring, when they burst forth with renewed energy.

They form suitable and very pretty objects, if kept close and bushy, for planting in large beds; or they may be trained to cover a trellis or wall. In either position they are effective summer ornaments.

No. 2. *Fuchsia serratifolia* is a new species, which may be grouped with *F. corymbiflora*, *F. fulgens*, and some other species of similar robust character, that are known in herbariums, though not yet, or but few of them, introduced in a living state to this country.

It was originally discovered by Ruiz and Pavon, at Muna, in Peru; and was mentioned by them in their "Flora Peruviana," along with some others, described as surpassingly beautiful, that are not yet known to us. The best of these is perhaps *F. denticulata*, found both at Cheuchi and Huassa, in Peru, where it is significantly termed by the natives, "beautiful plant."

The present species was sent to England from Peru, along with the *Syphocampylos* just mentioned, by Mr. W. Lobb, who has been for some time assiduously engaged in exploring that part of the world in search of plants for Messrs. Veitch, with whom it commenced flowering in the early part of last summer. It is a tall growing plant, with ample foliage, and apparently prolific of flowers, which are brightly coloured and conspicuous. The species has been recommended by some as suited to the purposes of hybridising, our opinion is, however, decidedly opposed to this advice; its flowers are much too coarse in texture to compensate for the slight variation in colour obtainable through its means; and on the importance of securing a

smooth even tube and sepals to all future seminal varieties we think there cannot be the least hesitation. We therefore say, whoever grows *Fuchsia serratifolia*, must grow it for itself, as it cannot be of assistance in the production of fine hybrids. This, however, does not detract from its value as an ornamental plant, for it is well deserving a place in every collection of which Fuchsias form a part.

EDITOR.

### MANAGEMENT OF THE AURICULA IN WINTER.

AN error of much consequence frequently creeps into the calendarial directions usually given for the management of the Auricula in the winter, which occurs through the use of general terms, and perhaps a too liberal interpretation of them. It is this: most writers, in cautioning the tyro against the effects of a superabundant supply of water, advise but a very limited quantity: this term is far too indefinite for a beginner, as perhaps not two in twenty will understand it in the same proportions. It is true, a reduced, and, comparatively with the summer treatment, a very limited supply is all that is required, though the restriction need not be carried to the severe extent it too frequently is; and thinking some further explanation necessary of what is wanted, I send you a detail of my practice.

When the plants are first placed in frames, and for about a month after, I continue to water to nearly the extent of the summer supply, that the previous repotting may have its full effect on the plant. This is a point of the first consequence, and so treated, with the extra warmth of the sun (for I always select a southern aspect for wintering), they become thoroughly re-established in the pots, and form a new set of leaves, before the severe weather occurs. When this new growth is complete, which it usually is by November, the supply of water is reduced to a small quantity, applied about twice a week, just so much as will keep the soil moderately moist; and this is continued through the damp weather usual to this part of the year, until the arrival of clear frosty nights: then it is that the error of

keeping the soil dry becomes apparent, for it will be found that after three or four days' freezing, it is as perfectly incapable of supporting the plants as though it had been exposed for the same period to the effects of a summer's sun. To avoid this, let me advise the Auricula grower to give a full watering whenever a favourable opportunity occurs in such weather, so that the soil may hold plenty of moisture when likely to be frozen hard. It may be said, the presence of extra water will but increase the intensity of the frost; but I can assure all who object, that the plants are sufferers to a much greater amount, when, from the dryness of the earth, the moisture of their systems is absorbed. Every one must know something of the parching influence of a continued frost; and as it is impracticable to supply them with an addition through the frozen surface of the soil; and, moreover, we can never do more than guess at the probable duration of any kind of weather, it is well to be prepared on all occasions. What I particularly wish to advance is, that Auriculas should always have an abundance of moisture in the earth about them, on the approach of frosty weather that is likely to be of continued character, every care being taken at the same time to prevent its lodgement among the leaves of the plant.

FLORISTA.

## REMARKS ON THE HYACINTH.

HAPPENING to pass a good portion of last summer on the Continent, and my taste for flowers leading me very frequently into the society of those who grew them, I was enabled to glean a few particulars which may be useful; and if you wish it will communicate them as opportunity offers.

One piece of intelligence it is essential should be known directly, as it relates to the Hyacinth and Narcissus, flowers that occupy a good deal of attention at this period of the year. The greater part of those I saw, and they were not a few, wore an unkindly appearance, denoting an imperfect growth: the flower-stems were cramped, or turning at about half their length, grew downwards, instead of the erect robust appearance one might expect to witness, when growing in what may be termed

their native air. The foliage, too, of those in large beds was patchy, much of it yellow and sickly: indeed, but few gardens could boast an uniform luxuriant green among the plants: all these tokens plainly indicating that the roots would not be so fine, or likely to produce flowers equal to the average of ordinary years. The cause of it was undoubtedly the same which has occasioned so much disturbance in the vegetation of all Europe, viz. the extraordinary fluctuations of temperature experienced through the whole of the past season.

But these hints should not be lost to those at home, and therefore I am induced to trouble you, that the grower of Hyacinths may have timely notice of the necessity of some modification of his ordinary practice in forcing these flowers. One thing appears to me nearly certain, which is, that the roots will not bear to be excited in anything like a hasty manner, or many failures will be likely to occur. I should say, from my opinion of their strength, and it concurs with those expressed by several eminent growers in Holland, that the end of January should be the earliest period for their introduction to a raised temperature; and the same remark will apply to the Narcissus, for they are equally unhealthy; indeed, it was thought by some that there would be no roots of that favourite variety, Bazelman major, to send to England this year; and I find, on inquiry in London, that they are exceedingly scarce.

However, I am not about to give directions to those who may excel me in the culture of these plants; but sincerely hope this may be in time to prevent disappointment. L. G.

[There is an evident inferiority and weakness in the major part of the Hyacinths imported this season, and we would earnestly recommend, as our correspondent suggests, the very cautious and gradual application of heat in the forcing of all bulbous-rooted plants, or much disappointment will inevitably ensue. We have before mentioned the importance of this mode of treatment; but this season it is of increased consequence.—ED.]

## HINTS FOR THE FLOWER GARDEN.

WHEN we reflect that the Flower Garden is one of the principal sources of attraction in the pleasure-ground during the Summer months, and the most prominent and chief feature in all grounds of limited extent, we cannot but feel surprise at the very prevalent neglect of some of those things most essential to its perfect appearance, which are so conspicuously observable both in the formation and management.

In the formation of flower-gardens people are too apt to be led away, by the mere contemplation of the general effect and arrangement, from bestowing the proper consideration and attention on adapting them for the objects intended to be cultivated in them; forgetting that on this depends, in a large measure, the capacity to accomplish the general design of the whole. In laying out a flower-garden, then, beyond the consideration and judgment required to preserve harmony with the general garden scene, and to render the ground most eligible for displaying its floral garnishments to the utmost advantage, it is in an equal degree essential to provide those conditions which most contribute to the health and fertility of the plants. It ought not to be expected, though it commonly is, that the gardener, who has all the evils of previous mismanagement in the construction of the flower-garden to contend with, should be able to compete, in the culture of plants, with those to whom every facility is furnished to remedy the natural defects of the situation. The question then naturally arises—what are the points to which attention is principally requisite? And, in order to answer this, we must glance at a few circumstances connected with the subject, and necessary to its elucidation. And first, by far the largest number of the plants used for the parterre at the present day are natives of a much warmer and more equable climate than we have in this country, and are correspondingly more liable to suffer injury from the sudden variations to which they are exposed in the open garden. Keeping this before us, it will be evident that the first thing to which it is necessary to direct attention is the nature of the ground, and the locality, in reference to warmth and humidity. It is well known that a wet soil is always a cold one: and on

this account we should prefer (where choice is given) a gentle declivity rather than a dead level, as a site for the flower-garden, because of the greater facility which it affords for draining completely. This, however, cannot always be had; nevertheless, it is an indisputable point to secure a situation sufficiently elevated to enable water to escape readily during long-continued rains. Unless this can be done, it is useless to attempt growing even the most ordinary half-hardy border plants, as no dependence whatever can be placed on realising any success. But, supposing a situation sufficiently elevated has been selected, it is essential, also, to prevent the garden from receiving moisture from the springs in higher grounds. Such cases often exist; they are, however, easily remedied by passing a drain along the upper side to intercept the flow. Now, this is a matter of much importance, especially in a wet season, although it is one seldom looked to. Other drains may carry the water away freely, but the water in its passage robs the ground of a portion of its heat. A drain on the upper side prevents more wet from entering the soil than what falls immediately upon it; and must, therefore, assist largely in keeping up its temperature. In a clayey ground it will likewise be needful to adopt some means of ameliorating the mechanical texture of the earth, so as to render it sufficiently pervious to air and moisture to enable it to carry a healthy vegetation: sand, or the scrapings from a flint road, vegetable ashes, light loamy earth, decaying leaves, and heath soil, or the refuse from charring stacks, are amongst the best substances that can be used. To promote the utility of these preparatives in the general improvement of the soil, particular care should be employed in forming the beds severally. At least a foot of loose stones, covered with brick or lime rubbish, or other substance capable of furthering drainage, should be laid in the bottom of each bed. The advantage of this is greater than most people imagine. Nothing can be more injurious to tender plants in the open border than an accumulation of water about their roots; it produces a coldness in the soil, which, in spring especially, is so far mischievous that it frequently effects the destruction of the plant, and generally causes an inertness which it is not recovered from for some time. It is, indeed, as necessary to provide a quantity of

broken porous materials to carry off superabundant water from a flower-garden, as it is to employ drainage in the bottoms of flower-pots: or, if possible, it is more so; for we may regulate the supply of water to the pots, but we cannot cover our flower-beds from rain. We are fully persuaded, too, that the borders of the flower-garden are generally made both too deep, and of richer materials than the plants demand.

The proneness of half-hardy plants to assume a redundancy of vigour in the open garden rather requires some reduction of the means by which it is engendered, than to increase stimulatives to further it.

Flowers are the main thing looked for, and we only want a sufficient growth to promote their developement, and to cover the bed with shoots and foliage. The effects of a deep soil are merely to allure the roots away from the surface, and gorge the entire system with water, which cannot be assimilated, and is hence opposed to the furtherance of a floriferous state. Some plants, as the *Tropæolum tuberosum*, *Nierembergia linearis*, scarlet Pelargoniums, *Lobelia gracilis*, and other small growing species, *Mesembryanthemum tricolor*, and the hardy dwarf Gentians, require but a very slight covering of soil, if a stratum of lime rubbish, charcoal, broken bricks, and similar bodies is laid beneath.

Another thing which ought to be studied is, the contrivance of screens on the most exposed sides, particularly when the situation is subject to rough winds. By recommending shelter, however, we must not be interpreted to include shade, nor yet to advise a confined situation. Few conditions can be less favourable than a close stagnant atmosphere in a low place. The only shelter necessary is merely sufficient to break the force of the strong sweeping winds, which mutilate tender things so excessively. In a moist place, in the bottom of a valley, a considerable play of air is useful in carrying off the noxious vapours and moisture, which there accumulate in the atmosphere; whilst, if the garden be situated on high or sloping ground, a screen of greater density will be essential.

To promote a healthy vegetation and abundance of bloom, a flower-garden should decidedly have an aspect lying well to the sun. Most border plants, when not confined at the root, require as much light as possible, especially as the autumn

approaches. But there are some exceptions: for instance, the lovely little *Nemophilla insignis* revels in a partially shaded spot. With regard to the exposure to light, there are some particulars in the after-management of the plants in the open air which deserve attention. We allude chiefly to the usually crowded state of the shoots of many kinds during the latter months of summer, whereby the leaves are prevented from receiving their full share of solar influence; as, for example, the whole race of *Pelargonia*. If a little timely pruning, and occasional thinning out, were adopted, not only would the appearance of the bed be improved, but the quantity of the flowers would be increased, and their colour improved. Other plants, again, require stopping back, to keep them from straggling too far, and to further the developement of lateral shoots; and with others, as the Phloxes, and some species of *Salvia*, the same ends will be answered by fastening the shoots to the ground with small pegs.

It will be seen, that throughout the present article we have expressly had in view that portion of the pleasure ground especially styled the flower-garden, and devoted almost entirely to the culture of half-hardy plants in beds, each containing a single kind. Many of the points inculcated are applicable, either wholly or to a partial extent, to other departments, and some of the plants which unavoidably come under the general description here given may require some modification in the management; but these are comparatively few in number, and do not affect the general question."

[We have abridged the above from an article in "Paxton's Magazine on Botany" for last month, as it contains some really excellent practical advice, which cannot fail to be useful in the majority of ordinary flower-gardens — and the more especially as the present is the most available portion of the year for applying the hints thrown out. Nearly nine-tenths of the gardens round the metropolis are altogether without, or have but very inefficient, drainage; and in confined situations, like those we speak of, it is indeed of vital importance, not only to the welfare of the ordinary occupants of it, but to human life, and the enjoyment of it as well. — ED.]

## THE GENUS BEGONIA.

THERE are few ornamental stove-plants which possess greater interest, on account of their varied and sometimes noble character, together with the dense and lively inflorescence which distinguishes them—exhibited, too, at a season when the majority of Flora's train have ceased to charm, than the individuals composing this genus. They are all beautiful; and yet how seldom we find them in the stations they are so well adapted to embellish. This neglect is inexplicable: it cannot be that they are difficult of management, for their culture is of the easiest description; neither can a want of diversity, or even the charm of novelty, be advanced as a reason or excuse for this supineness. Whatever it is, must be left a matter of mere conjecture; notwithstanding, I am pretty certain all who have grown, even though it be but a few species, must duly appreciate them as very desirable winter-flowering plants.

They are chiefly natives of South America, and their habit of flowering in mid-winter renders their cultivation peculiarly devoid of trouble. The period of growth commences with them about the middle of August, when they are benefited by repotting; though, so remarkably free are they both to grow and flower, that I have known instances in which this particular has been neglected for three or four years without apparent injury to the plants: still a good-sized pot, with a mixture of turf-peat and leaf-mould, will enable them to produce vigorous shoots, and as a matter of consequence abundance of flowers. From this time up to the end of April, or sometimes to that of May, they require the temperature of an ordinary plant-stove, with rather an abundance of water, when they continue to display their lovely dioecious blossoms without intermission. The exact period of their retention in the stove must be regulated by their flowering. Just after it is over they should be removed to the greenhouse, in order to afford them the necessary rest. In this condition they merely require so much care as will prevent the soil about them becoming dry, and with a moderate pruning at the end of summer, all the art in their culture terminates. The following are a few of the best,

*B. Martiana, B. coccinea, B. Dregii, B. manicata, B. heraclifolia, B. ulmifolia, B. argyrostigma, B. lucida, B. sanguinea, B. insignis, B. picta.*

HORTULANUS.

### GLOSSARY OF TERMS USED IN BOTANICAL DESCRIPTIONS.

(Continued from p. 247.)

**CONSTRICATED.** Contracted or drawn together in a remarkable manner.

**CONTIGUOUS.** Applied in botany only when two neighbouring yet distinct parts are in contact through their whole length.

**CONTORTED.** Twisted; an irregular state of an organ, as when it is folded back on itself, or when developed in an unnatural manner.

**CONUS.** A cone.

**CONVERGING.** Drawing together, as when the petals of a flower by inflexure approach each other at their summits.

**CONVEX.** Possessing a rounded surface.

**CONVEXO-PLANE.** Rising in a circular manner on one side, and flattened on the opposite.

**CONVOLUTE.** Rolled together in a longitudinal direction, so as to enclose one edge.

**CORACINUS.** Lustrous jet black.

**CORALOID.** Of the colour or appearance of coral.

**CORCULUM.** The point of germination, an embryo.

**CORDATE.** Heart-shaped.

**CORIACEOUS.** Of a leathery consistence.

**CORMUS.** A succulent, rounded, underground stem, frequently termed erroneously a solid bulb: the crocus root is a corm.

**CORNEOUS.** Of the consistence and appearance of horn.

**CORNICULATE CORNUTUS.** Having processes resembling little horns.

**CORNU.** A horn.

**COROLLA.** The coloured parts of an ordinary flower: strictly

speaking, it is that division of a flower next above the calyx, and is composed of one or more parts, termed petals; occasionally it is entirely absent, when the calyx or even the bracts are usually found to be coloured.

**COROLLATUS.** Bearing a corolla.

**COROLLIFERUS.** Supporting the corolla.

**COROLLULA.** A floret, or diminutive flower.

## CORRESPONDENCE.

**A. F.** — The following are twenty-four species of *Orehideæ* that may be termed indispensable to every complete collection: —

<i>Eastern Species.</i>	<i>Western Species.</i>
<i>Aerides odoratum major.</i>	<i>Stanhopea oculata.</i>
<i>crispum.</i>	<i>tigrina.</i>
<i>Saccolabium guttatum.</i>	<i>insignis.</i>
<i>Dendrobium densiflorum.</i>	<i>Cattleya Mossiae.</i>
<i>nobile.</i>	<i>labiata.</i>
<i>moschatum.</i>	<i>Skinnerii.</i>
<i>Vanda teres.</i>	<i>Odontoglossum grande.</i>
<i>cristata.</i>	<i>Miltonia spectabilis.</i>
<i>Roxburghii.</i>	<i>Trichopelia tortilis.</i>
<i>Phalaenopsis amabilis.</i>	<i>Oncidium Lanceanum.</i>
<i>Phaius Wallichii.</i>	<i>Lycaste Skinnerii.</i>
<i>Angraecum caudatum.</i>	<i>Sobralia macrantha.</i>

Generally speaking, the Western species are of easier culture, and are on the whole more beautiful.

**T. WILD.** — Your seedling varieties of *Primula sinensis* are very beautiful; the crimson one is the best we ever saw.

**A SUBSCRIBER.** — We think Rosy Circle the better of the two mentioned.

**T. X.** — We cannot discover any difference in the *Chrysanthemum* sent and the old variety called *Minerva*.

## LIST OF NEW PLANTS.

**RUBIACEÆ.** — *Tetrandria Monogynia*.

*Ixora odorata.* We have been much gratified by the sight of a noble specimen of this splendid and highly odorous shrub. The leaves vie in size and almost in firmness of texture with those of the Indian Caoutchouc tree (*Ficus elastica*), while the numerous flowers, of the most delicious odour, form a spreading panicle, a foot or more in diameter, with deep red-purple branches; each blossom 4 to 5 inches in length; the tube red below, white above; the white buds tipped with rose-colour; the spreading segments of the limb white, soon twisted, and then changing to buff. The

plant, it appears, is a native of Madagascar; it was received from the continent by Messrs. Lucombe, Pince, & Co., under the incorrect name of *Ixora Brunonis*. — *Bot. Mag.* 4191.

**SOLANÆ. — *Pentandria Monogynia*.**

*Hebecladus biflorus*. A very pretty Solanaceous plant, with graceful drooping purple and green flowers; a native of the Andes of Peru, about Tarma, Canta, Cullnay, &c. It has only recently been introduced in a living state by Mr. Veitch of Exeter, through Mr. W. Lobb. It only requires a good greenhouse, and may be easily increased by cuttings, and probably by seed. — *Bot. Mag.* 4192.

**PASSIFLOREÆ. — *Polyandria Pentagynia*.**

*Smeathmannia larvata*. A rare and remarkable genus, consisting of upright (not climbing) shrubs, with white scentless flowers, nearly allied to *Passiflora*, first made known by Mr. Brown. The name was given by Dr. Solander, in compliment to Mr. Smeathman, an African naturalist and traveller, who detected the three species defined by Mr. Brown. This shrub constitutes a very desirable stove plant, with glossy, evergreen, almost distichous leaves, and white flowers growing downwards, and best seen on the underside of the branches. It was introduced by the Earl of Derby through Mr. Whitfield. — *Bot. Mag.* 4194.

**LEGUMINOSÆ. — *Diadelphia Decandria*.**

*Genista (Teline) Spachiana*. This is a pleasing addition to the many-flowered and sweet-scented group of Canarian *Genista*. It appears of diffuse habit, and the yellow flowers are borne numerously on rather loose spikes; being indigenous to the high mountains north-west of Teneriffe, it will probably prove hardy in the climate of England. — *Bot. Mag.* 4195.

**GOODENOVIEÆ. — *Pentandria Monogynia*.**

*Scævola attenuata*. A shrubby plant, a native of south-west Australia, first detected and described by Mr. Brown, possessing little beauty in its mode of growth or foliage, but in June and July bearing rather copious spikes of bright but light blue flowers, which then give it a very pretty appearance. Our plant was reared from seeds sent by Mr. Drummond from Swan River, and probably gathered to the southward of that colony, towards King George's Sound. It is cultivated in good loam, and treated as a greenhouse plant. — *Bot. Mag.* 4196.

*Azalea Ludovicie, garden hybrid*. This charming variety has been named Ludovicia by the Dean of Manchester, in compliment to his eldest daughter Louisa. It is a sister seedling to that lately figured under the name of *Lætitia*, from *Rhododendron ponticum*, by pollen of *Azalea pontica*. Nothing can be prettier than their delicately-coloured flowers. In the present instance, instead of a pale yellow or straw colour being the prevailing colour, we have a gay rosy tint superadded. — *Bot. Reg.* 60—45.

**ROSACEÆ. — *Icosandria Polygynia*.**

*Potentilla bicolor*. This pretty species is a perennial, with much the same kind of trailing habit as the old *P. nepalensis*, but it is rather more robust. In general appearance it looks like a hybrid between *P. atrosanguinea* or *nepalensis* and *insignis*; but it has certainly a wild origin. In some respects it approaches *P. insignis* itself; but its hairs are long and soft, not short and close; and its leaflets are in fives, not in threes. The appearance of the petals is most delicate and beautiful; their ground-colour is clear yellow, over which, at the base, is drawn a series of long hexagonal red meshes,

which form towards the circumference of the flower other meshes of a and closer fabric, till at last they melt as it were into each other, and fo clear red border to each petal. The plant grows freely in any good garden soil, and flowers from July to September. It was raised in the den of the Horticultural Society from seeds received from Dr. Royle, is said to have been collected either in Cashmere or Thibet. — *Bot.* . 62—45.

**PLUMBAGINÆ. — *Pentandria Pentagynia.***

*Statice Fortunei.* A yellow-flowered Sea-Lavender is a rarity. This, wh is a very interesting species, is a perennial, and will probably prove quite hardy. Its seeds were sent from China by Mr. Fortune in 1844, and were said to have been gathered at a place called Chin Chin, "growing in sand soil near the sea." The latter circumstance will probably enable us hereafter to cultivate it better; for Mr. Fortune's wild plants are not more than a few inches high, while those which have flowered in the garden of the Horticultural Society have been twice or thrice as large, or even more. They had been too tenderly treated. This is important, because it is easy to conceive that the beauty of a plant having many small flowers depends much upon the compactness. — *Bot. Reg.* 63—45.

**BIGNONIACEÆ. — *Didynamia Angiospermia.***

*Jacarunda tomentosa.* A very ornamental stove plant, of vigorous habit, with bright green bipinnate leaves, and large handsome tubular flowers of a peculiar purple-lilac tinge. It is a native of Mexico, whence seeds were first brought by Sir Thomas Hardy, and a plant raised from them produced flowers at Messrs. Whitby and Osborn's Nursery, in the summer of 1827. — *Pax. Mag. Bot.*

**LILIACEÆ. — *Triandria Monogynia.***

*Brodiaea grandiflora.* A plant deserving much more attention than it usually accedes to it, probably from the circumstance of its being suffered to bloom singly, instead of in extensive and rather dense masses. An individual plant of *Brodiaea grandiflora* would certainly have a somewhat meagre appearance on a lawn, with its narrow, scarce leaves and long flower stems; but plant a number of bulbs closely in a bed, and they will form in their flowering time (July and August) a sheet of the most delicate blue. The appearance of the species might also be improved by planting some small, quick-growing creeper in the same bed, to cover the soil with green foliage. *B. grandiflora* appears to have been first introduced about the close of the last century; it was also detected by Mr. Douglas during his botanical travels in North-west America, and transmitted to the Horticultural Society in 1826. — *Pax. Mag. Bot.*

**ORCHIDÆA. — *Gynandria Monandria.***

*Cattleya granulosa*, var. *Russelliuna*. Some fatality seems to have attended this beautiful plant in our gardens. It was sent to Sir W. Hooker, from Woburn, as a Brazilian Orchid; but we can find no evidence to show that it is a native of even the Southern hemisphere. At Syon, where it bloomed in May, 1844, it is said to have been received from Dr. Wallich in 1839, which is probably another mistake. There can be no doubt at least about its being in reality a very fine variety of the *Guatemala*, *C. granulosa*, and its introduction may with good reason be referred to one of Mr. Skinner's numerous importations. The colour of the sepals and petals is an olive green spotted rather sparingly with red, and the lip is white on the outside and at the apex, the interior, for about two thirds of its length from the base, being yellow thickly dotted with crimson. The large membranous wavy petals, great erect flowers, and long lip spread out at the point into a broad trans-





ROUVARDIA FLAVA

verse plate, are different from the same parts, and distinguish it from the smaller resupinate flowers of *Cattleya guttata*. — *Bot. Reg.* 59—45.

*Oncidium incurvum*. This striking and very peculiar species was first observed in this country by George Barker, Esq., of Birmingham, from whose rich collection we were favoured with flowers in 1840. Since that period it has found its way into the possession of others, especially of Mr. Ferguson, late gardener to the Duke of Buckingham, who succeeded in growing it extremely well. It is, however, still one of the more rare species. Mr. Barker gave it the name of *incurvum*, in consequence of the petals having a great tendency to turn inwards, when the flowers first open; that tendency is, however, eventually lost, and the parts assume the position customary in the genus.

In some respects it resembles the *O. ornithorhynchum*, but it bears its flowers in a long, erect, and even branched panicle, and it has neither the long rostel nor the great column-wings of that species. Its colours, moreover, are very different, for its sepals and petals are regularly and neatly banded with red, on a white ground, instead of being of one uniform rosy tint.—*Bot. Reg.* 64—45.

*Lycaste fulvescens*. From the rich collection of the Rev. John Clowes of Broughton Hall, Manchester, who received it, along with *L. gigantea*; and other Orchidæ, from the province of Coro in Columbia, where it was collected by Mr. Linden.

It has smaller flowers than those of *L. gigantea*, the middle lobe of the lip is beautifully fringed, and the colour is a rather pale tawny, with an orange-coloured lip, and the habit of *L. macrophylla*. — *Bot. Mag.* 4190.

## ON THE GENUS BOUVARDIA.

WITH AN ILLUSTRATION.

ALL the species of Bouvardia hitherto known are esteemed favourites of the flower-gardener, and we believe the value of such plants as *B. triphylla*, *B. splendens*, &c., for any of the purposes of early spring or summer embellishment, cannot be excelled; but one regret existing with respect to the genus, — that there were not other varieties as beautiful. This month we have the pleasure of introducing to our readers a new species, entirely distinct from any of the previous ones, and equally ornamental, which will considerably lessen the regret spoken of. For the opportunity we are indebted to M. Louis Van Houtte, nurseryman of Ghent, who kindly sent us a drawing of the plant some time since. The habit of this new plant is, like that of the other species, somewhat lax, if left to itself, but may be easily corrected by closely pruning previous to the development of the new growth, and with only oc-

casional "stopping," as may appear desirable, in the growing season, will not fail to form a handsome dwarf spreading bush, with a copious display of its lively yellow, gracefully pendent flowers. Its treatment, we understand, is exactly that usually pursued with *B. splendens*, when required for bedding out, and in the same situations makes an equally ornamental object: it has hitherto refused to bloom so well as could be wished under a forcing regimen, — the flowers thus produced being smaller, and the colour watery and undecided; but with abundance of air, as it would receive either in a greenhouse or the open air, the opposite may be considered the rule. It is, we believe, like the other known species, a native of Mexico and the adjacent parts of the northern division of the continent of America, and this will account for their insisting on an open airy situation.

The proper treatment of this and the other well-known species appears so intimately blended, and they are so universally included in the list of half-hardy bedding plants, that we need not do more than glance at its leading features. They are propagated by cuttings of the new wood, taken off in spring; these readily root in a bottom-heat of 65° or 70°, and grow rapidly in peat and loam, with a somewhat reduced temperature. After becoming thoroughly established in the pots, they are turned into the open ground as soon as danger from frost is past; and if planted in light rich earth, grow and flower profusely. In the autumn they are taken up and repotted, and should be kept in a cool pit, or on a light shelf in the greenhouse, with as low a temperature as is consistent with safety from frost; any excess of either heat or moisture being particularly injurious to them at this part of the year. Propagation may also be effected when a large quantity is required, by means of pieces of the rhizoma or root, which, if divided into lengths of about two inches, and potted, to receive the treatment recommended for cuttings, speedily burst into leaf, and ultimately make equally useful plants. For the flower-garden, the beds intended for them should be in a sunny position, well drained, and composed of peat, leaf-mould, and loam thoroughly broken up, and well mixed: here the rich luxuriant green of the foliage, and vivid tints of the flowers, betoken the fitness of both soil and situation. — ED.

## CULTURE OF CENTRADENIA ROSEA.

AMONG the many interesting plants which now ornament the stove and conservatory the Centradenia rosea stands conspicuously prominent, remarkable alike for its graceful habit, curious copper-coloured leaves, and the profusion of flowers which cover it; forming, in the whole, a neat and lovely object, peculiarly adapted for an isolated position such as would be afforded by placing it on a pedestal, or an elevated part of the central stage: when well grown and seen apart from other plants, in the manner described, its appearance is most imposing.

The Centradenia is very readily increased by means of cuttings, which may be taken off at any time, although in preparing the cuttings it will be necessary to select those pieces which appear the firmest, as the ripened wood of the preceding season will be found to strike more freely than the succulent green shoots recently formed. The compost best suited for the cuttings is an equal mixture of peat and silver sand, mixed well together, and rubbed fine. The pots intended for the cuttings should be filled about two-thirds up, supplying the deficiency with pure sand: in this the cuttings should be inserted, and, when properly placed, a gentle watering should be given to the soil. The best method to do this is to dip the pot into a tank, or other vessel containing water, until it flows a little above the surface of the earth; the returning action of the water settles the sand firmly round the base of the cuttings, without incurring the inconvenience and risk of beating the foliage into the soil which attends the application of water by means of the syringe or water-pot. A glass should be placed over the cuttings immediately they are potted, and when finished plunge them into a gentle bottom heat, and shade them from the rays of the sun. As soon as they have taken root the glasses may be removed; and after a few days' hardening, they may be placed separately into small pots, using a mixture of well-rotted leaf-mould and peat, adding a third of sand, observing to use it in as rough a state as possible, the object being to render the mixture pervious to both air and water. A place upon a shelf near to the glass in the stove, with attention to watering, will be all

that is required for them till the latter end of June, when they should be taken to the greenhouse in order to afford them a season of comparative rest. Here they form their flower-buds; and on resuming their station in the stove about November, they burst forth and continue in beauty for a long period.

After this first year's growth, it will be well to inure the plants to a cooler treatment, by placing them in the greenhouse at an earlier season than that mentioned for the recent ones, say about March, or as soon as their flowering is past. This induces a closer and more compact growth than will be obtained from the higher temperature of the stove, and occasions less trouble in their management, as it precludes the necessity of stopping the shoots, and generally less water will suffice, besides the additional advantage of inducing a more copious supply of flower-buds. Here, if the plants are allowed a good space on all sides, and have only ordinary attention, <sup>they</sup> may reasonably be expected to form large and handsome heads, which, on the return of winter, will be found to be profusely dotted with its pretty flesh-coloured blossoms; and if a number of plants have been obtained, it will be easy to insure a successional development by managing their introduction to a warmer atmosphere at intervals, the first to be taken to the stove about the middle of October, while the last will probably remain in the greenhouse altogether. The proper season for repotting mature plants is soon after the blooming season is past; and they should be allowed an abundant supply of fresh earth, as it will be found that their minute fibrous roots extend and ramify in inconceivable numbers; and the proportion of food must be equal, or the deficiency will be apparent in the stunted appearance of the leaves and branches.

HENRY ROBERTS.

## FLORAL INTELLIGENCE.

## ROYAL CALEDONIAN HORTICULTURAL SOCIETY.

THE quarterly meeting was held on Thursday the 4th September, when a keen competition took place among the cultivators of Carnations and Picotees, Hollyhocks, and Phloxes. In Carnations each competitor exhibited six flakes and six bizarres. The silver medal was awarded to Mr. Peter Thomson, gardener to W. E. Hope Vere, Esq., Craigiehall, for Sealy's Princess Royal, Appleby's Prince of Wales, Hogg's Champion, Ely's Lovely Ann, Brooks's Flora's Garland, Mausley's Beauty of Woodhouse, Rainsford's Gameboy, Ely's Lord Milton, Mausley's Bonny Bess, Headley's Will Cobbett, Ely's Lady Ely, and Lady Gardiner. A second premium for Carnations was voted to Mr. John Young, gardener to Mrs. H. N. Ferguson, Archerfield. The Picotees made a fine display, the competitors being numerous, each producing six varieties, and a pair of each kind. The silver medal was assigned to Mr. Young, Archerfield, for Sharp's Duke of Wellington, Giddon's Teazer, Nulli Secundus, Wilson's Octavia, Ely's Field Marshal, and Ely's Mrs. Lilly. A second premium was voted to Mr. David Foulis, gardener to James Tytler, Esq., of Woodhouselee; and a third award was made to Mr. Thomson, Craigiehall. The show of Hollyhocks was very extensive and brilliant, there being seven competitors, each producing twelve sorts, and many of the flowers being of the most gorgeous description. The silver medal was voted to Mr. Alexander Foulis, gardener to Thomas Smith, Esq., Polton, for Sulphurea, Polton Beauty, Brown's Superb, and the Purple, with eight seedlings of 1844. A second premium for Hollyhocks was awarded to Mr. Foulis, Woodhouselee. The Phloxes made a good appearance, but they were more select than numerous. The silver medal was voted to Mr. Foulis, Woodhouselee, for Phlox Van Houttei, striata, omniflora, elegantissima, Pontey's superb white, and pallida rosea; and a second premium to Mr. John Downie, gardener to John Russel, Esq., Canaan Bank. On this occasion various extra articles were produced, for several of which honorary premiums were awarded. In particular, to Mr. John Purdie, Stanwell Lodge, for a mag-

nificent plant of *Lilium lancifolium speciosum*, bearing upwards of thirty flowers. Mr. John Reed, gardener to Professor Syme, Mill-bank, for admirably grown plants of *Achimenes longiflora* and *A. grandiflora*, and for very large and beautiful specimens of *Celosia cristata*. Messrs. Carstairs, Kelly, and Company, Warriston, for a remarkably fine flowering plant of the *Fuchsia* named *Duchess of Sutherland*, and for rich collections of Carnations, Hollyhocks, and Dahlias, sent for exhibition. Mr. Alexander Forrester, gardener to Captain Falconar, Carlowrie, for a seedling hybrid *Lathyrus latifolius*, the white having been crossed with the pink coloured, producing blossoms prettily veined; and for *Yucca flaccida* in flower. Mr. John Street, gardener to Mrs. H. N. Ferguson, Biel, for a seedling Myrtle, raised from a seed of a broad-leaved myrtle ripened in the open air at Biel: a variegated seedling *Mimulus*. Mr. James Gibson, gardener to J. T. Murray, Esq., Eskbank, for a tray of seedling Petunias, some of the flowers being of large size and bright colours. Thanks were voted to Messrs. J. Dickson and Sons, Inverleith Nurseries, and to Messrs. Handasyde, Glen Nurseries, for rich collections of Dahlia blooms sent for exhibition only.

#### THE WILTS HORTICULTURAL SOCIETY.

THE anticipations formed from the announcement of the grand Horticultural Fête in Salisbury have been more than realised. Many years have elapsed since so splendid an assemblage of rank, fashion, and beauty of Wilts and the adjoining counties has been witnessed, as that which on Tuesday, September 16, thronged the gardens of Colonel Baker, which, exceedingly beautiful as they are at all times, never bore a more attractive appearance than on this occasion, when they were crowded by an elegant company, who appeared fully to appreciate the efforts that had been made to minister to their recreation both by Colonel Baker, who, with much kindness, had placed his grounds at the disposal of the Society, and by the committee to whom the management of the *fête* had been entrusted. The gateway was elegantly decorated with antique carving and

tapestry, supplied gratuitously by Mr. Thomas Keynes, cabinet-maker, of Salisbury. On entering the gardens, the first and most prominent object that arrested attention was a noble *Agave americana*, or American *Aloe*, just coming into bloom, which had been sent for the occasion by the Rev. E. Duke, of Lake House: this was, and with justice, a highly-attractive object, and was greatly admired. The show of flowers, the season of the year considered, was superb, including many rare and costly floral beauties. Among others we noticed a charming collection of plants in the highest state of perfection, exhibited, not for competition, by Mr. Wheeler, of Warminster. Those contributed by Mr. Downie, gardener to J. Brymer, Esq., of Burgate, but not for competition, attracted much attention. The garden front of Colonel Baker's residence presented a splendid floral decoration — namely, the arms of the proprietor beautifully emblazoned, composed of dahlias, so disposed as to have the appearance of a beautiful painting on velvet. It was the work of Mr. J. Keynes, florist, assisted by Mr. W. Atkins, and had a fine effect. The grounds themselves were rich in their summer garb, and displayed fresh beauties at every turn; the ornamental waters, covered with the rarest aquatic fowl — the magnificent aviaries, rich in birds of the loveliest plumage — the gold and silver pheasants, and a multitude of other attractive objects, afforded an almost ceaseless succession of recreation and amusement.

The prizes were awarded as under: —

To Mr. Phillips, gardener to W. H. Maund, Esq., best orchideous plant, *Miltonia spectabilis*, and extra prize for collection of plants. Mr. Brown, gardener to the Hon. Sidney Herbert, second best orchideous plant, a fine *Stanhopea tigrina*; third best collection of plants; best greenhouse plant, a very good dwarf *Statice Dickinsonii*, second best ericas; second best fuchsias. Mr. King, gardener to G. Lawrence, Esq., Cowesfield, best stove plant, *Nepenthes distillatoria*, in very fine condition; best specimen ditto, a large *Lisianthus Russellianus*, with remarkably deep-coloured flowers. Mr. White, gardener to C. B. Wall, Esq., M. P., second best stove plant, *Juanulloa parasitica*, in good health; best ericas. Mr. Dodds, gardener to Colonel Baker, third best stove plant, *Melastoma sanguinea*; second and third best greenhouse plants, *Tropaeolum Lobbianum*,

and *Veronica speciosa*; best collection of plants. Mr. Macintosh, gardener to J. C. Wyndom, Esq., second best collection of plants; second best specimen plant, a beautiful *Clerodendron squamatum*; third ditto, *Gesnera Zebrina*; second best cut flowers. Mr. Herod, gardener to the Bishop of Salisbury, best fuchsias; second best China asters. Mr. Evans, gardener to Colonel Buckley, prizes for collection of plants, citron, and orchideous plant, *Cattleya Harrisonia*. Mr. Tomlinson, gardener to Sir Edmund Antrobus, extra prize for collection of plants.

*Amateurs' Class.* — W. B. Blackmore, Esq., best greenhouse plant, *Agapanthus umbellatus*; best French Marigolds. Mr. W. Dowding, best dahlias. J. Staples, Esq., Belmont, second best greenhouse plant; best cut flowers. Mrs. Stevens, best China asters. Mr. Holly, second best China asters. Rev. C. Fawcett, second best Marigolds; second best French ditto. W. Smith, Esq., second best cut flowers.

*Open Class.* — Mrs. Montgomery, best collection of plants; best cut flowers; extra prize for roses. W. Smith, Esq., second best device.

#### NOTTINGHAM FLORAL AND HORTICULTURAL SOCIETY.

THE fourth and last exhibition for the season of this Society was held on Wednesday, 17th September, at the Exchange Rooms in this town. Notwithstanding the very unfavourable state of the weather for a week previous to the show, with two very severe frosty nights, the display of dahlias, which always forms the chief feature of the September meeting, was most excellent as regards quality, and were decidedly the best ever exhibited in Nottingham; nay, we very much doubt if the pan of 24 blooms forwarded by the Rev. R. Sutton, to which the first prize was awarded, was ever surpassed, for we never have seen one so good; and we heard those declare the same who are in the habit of attending most of the leading exhibitions in England. The same remarks will apply to the best pan of 12 blooms, exhibited by J. H. M. Sutton, Esq. The second prize of 24 blooms was awarded to Mr. Edwards, for some very beautiful flowers. The best collection was taken by the Rev. R. Sutton, and the second by Mr. J. Spencer. These were likewise superb flowers.

The stove and greenhouse plants were, considering the lateness of the season, very good; as were the collections of *Gloxinias* and *Achimenes*, forwarded by A. Low, Esq.

*Dahlias.* The best 24 blooms (open to nurserymen and amateurs), for Standard of Perfection, *Blanch Shelley*, *Mrs. Shelley*, *Virgil*, *Princess Royal*, *Princess Alice*, *Sir J. Richardson*, *Consolation*, *Essex Champion*, *Antagonist*, *Model*, *Lady Harland*, *Perpetual Grand*, *Lady Antrobus*, *Bridesmaid*, *Lady Baher*, *Countess of Pembroke*, *Aurantia*, *Prince Albert*, *Pickwick*, *Nonpareil*, *Admiral Stopford*, *Ovid*, and *Argo*—The Rev. R. Sutton.

2d best. *Admiral Stopford*, *Beauty of the Plain*, *Maria*, *Antagonist*, *Standard of Perfection*, *Aurantia*, *Mrs. Shelley*, *Rival Yellow*, *Dodd's Prince of Wales*, *Sir R. Sale*, *Perpetual Grand*, *Essex Triumph*, *Nonpareil*, *Lord Sandon*, *Virgil*, *Pickwick*, *Girling's Prince of Wales*, *Great Mogul*, *Pet Rival*, *King of the West*, *Hero of Stonehenge*, *Springfield Rival*, *Andrew Hoffer*, *Bridesmaid*—Mr. Edwards.

The best amateurs' pan of 12 blooms. *Standard*, *Sir J. Richardson*, *Consolation*, *Pickwick*, *Blanch Shelley*, *Prince Albert*, *Essex Triumph*, *Perpetual Grand*, *Argo*, *Admiral Stopford*, *Aurantia*, *Princess Alice*—J. H. M. Sutton, Esq.

2d best. *Mrs. Padley*. *Hero of Stonehenge*, *Mrs. Shelley*, *Admiral Stopford*, *Girling's Prince of Wales*, *Bees' Wing*, *Maria*, *Aurantia*, *Pet Rival*, and three seedlings—Mr. Seaman.

3d ditto. *Antagonist* *Lewisham Rival*, *Sir J. S. Richardson*, *Mrs. Shelley*, *Standard of Perfection*, *Admiral Stopford*, *Dodd's Prince of Wales*, *Queen of Roses*, *Perpetual Grand*, *Essex Triumph*, *Nonpareil*, *Pickwick*—Mr. Hirst.

4th ditto. *Mrs. Shelley*, *Pickwick*, *Antagonist*, *Essex Triumph*, *Hero of Stonehenge*, *Prince of Wales*, *Standard of Perfection*, *Admiral Stopford*, *Sir J. Richardson*, *Springfield Rival*, *Aurantia*, *Bridesmaid*—Mr. J. Nevill; fine seedling, Mr. Spencer; the best collection, the Rev. R. Sutton; 2d ditto, Mr. Spencer; cut flowers, H. Smith, Esq.; 2d ditto, Mr. Hope-well; Device, Mr. Hirst; collection of Hollyhocks, Col. Wildman; ditto of Stocks, Mr. Edwards.

## CALENDAR FOR DECEMBER.

As little remains to be done out of doors now in the way of collecting specimens, except by those studying cryptogamic botany, the time may be employed in arranging and mounting the specimens already secured. If the natural system be determined on, as previously recommended, a better list could hardly be followed than that of the Botanical Society of London, an arrangement that will no doubt be very generally used, as it offers so many facilities for uniformity in nomenclature, identifying species, exchanging specimens, &c. The size and quality of the paper for mounting them on will of course be a matter of individual taste; a small folio is large enough for nearly all purposes. The easiest method of securing the specimens to the paper is perhaps with small straps of any adhesive gummed paper, similar to the postage stamps, as by this means any specimen may be replaced should better ones be afterwards collected. If it be determined to permanently fix them to the paper, weak glue is perhaps the very best material for the purpose, carefully applying it to the back of the specimen, and then laying the latter on to the paper, and sufficiently pressing them until dry. By this method there is little hope of their becoming deranged, unless submitted to dampness sufficient to destroy the specimens as well as damage the glue.

In the Flower Garden care must be taken to shelter beds of bulbs, and any others requiring it, as well from too much wet as from frost. If the weather prove open, beds or plants of strong hardy perennials may be planted or divided, as they may require. Alterations in shrubberies, or clumps of shrubs, may also be attended to, and advantage taken of favourable opportunities to proceed with heavy out-door work. Unfavourable weather will afford time for arranging the plan of planting the flower-garden for the next season, settling the arrangement of colours, and taking stock so as to see what plants will most require propagation in the spring. Making tallies and sticks, cleaning pots, &c., must also be attended to, and every thing should be forwarded as much as possible.

In the Greenhouse and pits care must be taken to keep as even a temperature as possible, avoiding cold dry currents of

air on the one hand, and the application of too much moisture on the other. A temperature very little above freezing is sufficient for the pits, and from that to not exceeding  $45^{\circ}$  is enough for the greenhouse. All the light possible, and, with a view to the above points, a free supply of air, must also be admitted to the plants.

The generality of stove plants must still be kept as dormant as possible, the house not ranging higher than  $65^{\circ}$ , whilst the heat may fall six or eight degrees below that at night. All stagnant water or confined air should be prevented as much as possible, and the house kept as sweet and clean as possible. If it be necessary to force hardy or other flowers in this structure, such plants should be placed in the lightest and most airy situations, and be removed to a cooler house as soon as sufficiently advanced.

D. M.

**FLORISTS' FLOWERS.**—The florist will now have a leisure period for two or three months. The Tulips are safe in the ground; Dahlias are stored; Picotees, Carnations, Auriculas, and Pansies, are comfortably disposed in their winter quarters, and nothing more than the ordinary routine of occasional watering and frequent airing will engage his attention. It is therefore an excellent time to provide and properly work up a good stock of soils, and attend to the preparation and condition of all other matters connected with the growing season.

P.

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